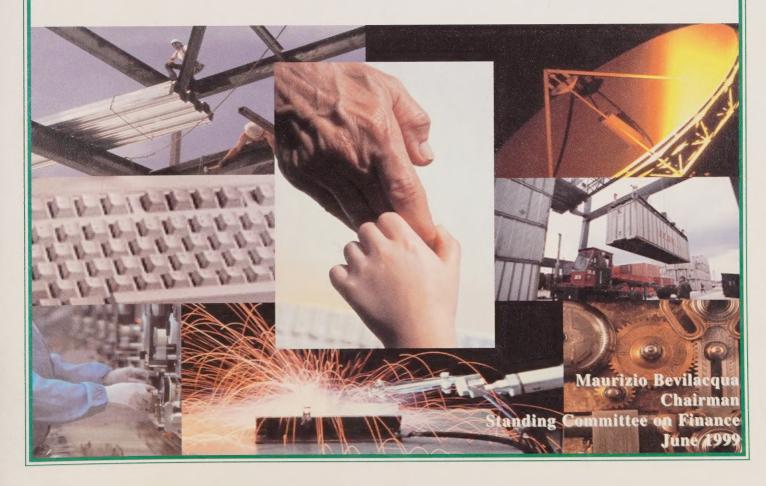


HOUSE OF COMMONS CANADA

PRODUCTIVITY WITH A PURPOSE

Improving the Standard of Living of Canadians



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PRODUCTIVITY WITH A PURPOSE IMPROVING THE STANDARD OF LIVING OF CANADIANS

Twentieth Report of the Standing Committee on Finance

Maurizio Bevilacqua, M.P. Chairman

June 1999

OVING THE STANDARD OF LIVING OF CANADIANS



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THE STANDING COMMITTEE ON FINANCE

has the honour to present its

TWENTIETH REPORT

In accordance with its mandate under Standing Order 108(2), your Committee has studied Productivity and has agreed to report the following:

THE STANDING COMMITTEE ON FINANCE

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CHAIRMAN'S FOREWORD

Since 1993, when the federal government inherited a \$42 billion deficit, the Canadian economy has achieved a remarkable comeback. The deficit has been eliminated and the debt is being paid down, while unemployment has fallen from more than 11% to 8.1%. Now that the recovery is well underway, it is time to consider some of the longer–term challenges facing Canadians.

As we reflect upon the challenges and opportunities of the new millennium, it is clear that innovative and modern policies will be needed to meet the needs of the future.

Canadians have worked hard and sacrificed much in the past decade. In doing so they have helped to set the stage for a sound and more prosperous economy. We believe that priority should be given to individual Canadians, in reaping the benefits of that prosperity. In other words, we believe that Canadians deserve a higher standard of living and deserve the prospects of an ever increasing standard of living.

Economic growth, fuelled by productivity increases, is the key to that higher standard of living. This is not something that can be achieved overnight. It requires policies that are farsighted, and that will produce long—lasting benefits far into the future.

Thus, the Committee has undertaken this study to understand the key elements of productivity enhancement and to enable us to make recommendations in our pre-budget report next fall that will position the Government of Canada to facilitate productivity growth.

There is much about productivity that we do not know. Our measurement of this phenomenon is less than perfect. Even the experts disagreed on some fundamental issues. Nevertheless, it is quite apparent to the Committee and to Canadians as a whole that our standard of living could be higher and our productivity could be better.

Indeed, not only could our standard of living be higher, it should be higher, and it must be higher.

We must build on those factors that made Canada a prosperous nation in the past, by developing those that will make us a prosperous nation in the future. Our wealth will be found in our minds. It will reside in our businesses, our schools and laboratories. Our wealth will rest with individual Canadians. We will have to create these sources of wealth, attract them, and keep them in Canada.

If Canada is to remain a healthy and vibrant society it needs a sound and prosperous economy, one that benefits all Canadians. Economic growth and a high standard of living will in many respects be the solution to a variety of challenges now facing Canadians. It will lead to better opportunities for families with children. It is a

solution to the increasing demands for health care that will come from an ageing population. It will allow the disposable income of families to increase. And it will lead to less unemployment and greater income security.

Productivity growth that promotes a higher standard of living does not arrive overnight. The results will be seen only after some time. Thus it will require that the government look far into the future, and resist the temptation to seek quick fixes.

Our greatest rewards come from investments for the future. We must have patience. However, those rewards can be astounding. The results of enhanced productivity are long-lasting and cumulative. A small increase in the long-run rate of productivity may not have a large impact, initially; but, maintained year after year, its long-run effects can be substantial. This is why productivity enhancement requires a longer-term focus on the part of government; looking only at short-term consequences will invariably mask its true benefits.

Productivity is essentially about the manner in which the economy operates. As a result, it is primarily determined by the direct actions of the private sector. Nevertheless, productivity will be affected by the policies of government because it sets the framework within which the private sector operates. Our goal, as a committee, is to discover the appropriate framework that will have a positive impact on increasing productivity.

In undertaking this study, we learned that the topic is subject to a great deal of uncertainty. The measures of productivity tend to be imprecise and for a variety of reasons, fail to give an accurate picture. The relationship between productivity growth and other economic variables is also not known with certainty.

Nevertheless, we do know that our productivity performance in the last two decades has deteriorated. We do know that there are certain policy measures that clearly favour productivity growth. Waiting for perfect certainty, and perfect measures, would only serve to maintain a rate of economic growth that clearly can be improved upon.

The most important element of this framework is the monetary and fiscal environment facing the private sector. Today that environment is dramatically different than it was a decade ago. We have low inflation, low interest rates, and declining government debt. Indeed, we have attained the same policy environment that existed when we experienced our "golden years" of economic growth. While more is needed, the federal government has clearly succeeded with this necessary and important first step.

The other important element of this framework is the manner in which product, capital and labour markets work. Competition forces firms to be efficient and dynamic. It helps to enable economic resources to be channelled to their most productive uses.

I referred earlier to the longer—term focus that is needed if government were to pursue a policy of productivity enhancement. This longer—term focus is the result of the nature of productivity. It is like an investment. As a result, initiatives must be undertaken today so as to receive benefits tomorrow.

These investments are wide-ranging. They include investments in machinery and equipment, R&D and new technologies. They also entail investments in public infrastructure, human and social capital. Investments also need to be made in new ways of organizing capital and labour in business firms.

How do we encourage such investments? Canadians, whether individuals or firms, need to have confidence that they will reap sufficient benefits from those investments. We must ensure that success is rewarded. They must have confidence in the prospects of the economy and they must have a feeling that the tax system enables them to earn an adequate rate of return on their investments. Thus an efficient tax system is an important element influencing productivity.

Canadians must also have the ability to react to economic opportunities. They need an economy that is vibrant and flexible, comprising individuals who have the skills needed for the new economy. Education and life—long learning are the key ingredients in creating the essential human capital that will be the basis of our well being.

An economy is also made vibrant and flexible when it is subject to strong competition and is free of unnecessary regulatory burden. Free trade, internationally and within Canada, is vital to promoting competition. A regulatory environment that subjects the economy to regulations only where and when needed is also vital to the creation of a vibrant and flexible economy.

The Committee's concern with productivity is not a new one. We started to deal with the matter in a serious way in last year's Pre–Budget Consultations Report. Moreover, our report on the Task Force on the Future of the Financial Services Sector in Canada was very much a report concerned with enhancing productivity in that sector.

Thus productivity is not a subject that stands apart from the other priorities of the government. Instead, it is a subject that complements other policies of government. Enhanced productivity will improve our standard of living and provide Canadians and their governments with the resources needed to satisfy their wants and meet their policy objectives. This is precisely the way in which we view the subject.

As Chairman of the House of Commons Standing Committee on Finance, I would like to take this opportunity to thank the Members of the Committee for participating in this study. At times the subject matter seemed almost unfathomable. But productivity is a vital topic, one that is at the heart of our future well-being, and the well-being of our children. This study could not have been a success without their dedication and persistence.

I would also like to thank the witnesses who helped to make understandable this complex subject matter.

Finally I would like to thank the staff. This study and Report could not have been undertaken without their contribution. In particular, I would like to thank Pat Steenberg, the Clerk of the Committee. She was ably assisted by Lise Tierney and Denyse Croteau. My Special Assistant Jennifer Demers deserves mention for her tireless efforts. Also, the research staff deserve mention. These are, from the Parliamentary Research Branch, Julie Cusson and Rose Pelletier. Special thanks go to Marion G. Wrobel for his devotion, dedication and commitment to the work of the Finance Committee. His contribution is greatly appreciated.

CARPE DIEM

Maurizio Bevilacqua

PRODUCTIVITY WITH A PURPOSE:

IMPROVING THE STANDARD OF LIVING OF CANADIANS

INTRODUCTION

Ultimately, all government policies are designed to enhance the standard of living of Canadians. They do so by providing certain core functions: a legal framework within which the economy operates, stable fiscal, monetary, and financial systems, public infrastructure, measures that protect the integrity of the environment and that provide a sense of economic security. These are public goods that the private sector cannot generally provide and their efficient supply by government will support a well–functioning, and growing economy. Governments also publicly produce some services because Canadians may prefer that to the private provision of those services, and the public provision of those services might be more efficient than their private provision. In Canada the most notable example of this is basic health care.

All of these goods and services require economic resources, which merely means that to enjoy their benefits, other, privately—provided benefits must be given up. In total, the private and public goods and services that Canadians consume must be produced and it is the value of this production that ultimately constitutes the limit to our standard of living.

If we look back at our history, it is evident our standard of living has increased enormously. By any measure, we are far better off today than we were several generations ago. Mr. Paul Kovacs made this point well when he told the Committee "if you take just an average Canadian family of about 40 years ago, if you use today's measures, even with adjustments for inflation and such, an average family of 40 years ago would be considered poor today."

This phenomenon did not happen overnight, nor was it the result of any single event. Instead, it was the cumulative result of many changes that took place over the decades – it was the result of economic growth.

Even relatively high rates of economic growth do not present dramatic effects from year to year. But over time, and cumulatively, the effects can be astonishing. A 2 percent annual growth rate will not quite double the amount of income in thirty years. A 3.5 percent growth rate will almost treble income over the same period, approximately the length of one generation. The difference, after one generation is approximately equal to the original level of income.

Clearly then, economic growth is a long-run phenomenon. It is what produced our current standard of living. It is what will determine our future standard of living; consequently it is about our children and our children's children.

Government policy plays a vital role in enhancing the domestic environment that is conducive to strong productivity growth, sustained GDP and therefore a higher standard of living for all Canadians.

Nancy Hughes Anthony





Governments need to focus more on long-term challenges. Long-term growth tends to ameliorate much of what is viewed as current problems. Consider again the lessons in arithmetic that economic growth offers. By the end of 1999, the Canadian economy will produce about \$900 billion in Gross Domestic Product (GDP). With a 2.5 percent growth rate, this will increase to \$1,018 billion after five years and a 3.5 percent growth rate will push it even further to \$1,070 billion. These are reasonably achievable real growth rates which suggest that five years from now the federal and provincial governments will have an extra \$38 billion to \$55 billion in combined annual tax revenues. This represents, at a minimum, one—half of what we today spend on health care services.

The 1999 federal budget has been referred to by many as a "health" budget, in large part because of additional health transfers, amounting to \$11.5 billion in total over five years. Raising the growth rate from 2.5 percent per year to 3.5 percent per year would pay for the health budget initiatives, and much more, allowing the government to undertake other initiatives as well.

This is the case for economic growth. Canadian families are today facing high debt burdens and stagnant disposable income. We all know about the effects that demographic change will have on the demand for health—care in particular and our society and economy in general. The number of seniors will almost double by the year 2030 and the ratio of working Canadians to retired Canadians will fall from the current 5:1 to 3:1. This is a 40 percent decrease in the number of working age Canadians per retiree and clearly indicates that workers would have to be much more productive just to maintain the current standard of living of all Canadians.

Economic growth is not a program for the benefit of business. It is for workers, consumers, and taxpayers. It is for all Canadians. History has shown us that all citizens in economies with strong democratic institutions and market economies benefit substantially from economic growth. Indeed, as stated well by Jim Stanford of the Canadian Auto Workers, "the "P" word is on everyone's agenda...it's incredibly rare that you would have agreement from economists on the right and left and the middle about an issue, but productivity may be one of those things...improving productivity, revitalizing productivity growth is a precondition for rising living standards."

As we will discuss below, there is much we do not know about the determinants of productivity. There is much confusion about measurement and other issues. But, in the words of Thomas d'Aquino of the Business Council on National Issues (BCNI), we should not "get bogged down in the details." Instead, we should set as a goal the task of raising the standard of living of Canadians. "No matter how we measure it, higher productivity is necessary to reach that goal."

The productivity debate is particularly problematic and particularly intense because it reveals in a very significant degree some of the most fundamental problems with economic analysis.

Fred Bienfeld

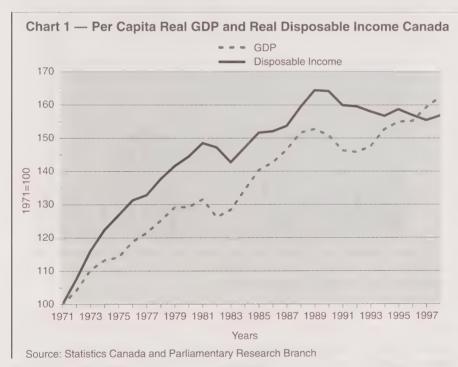


WHERE DO WE STAND?

The Canadian Standard of Living

There is a strong sense amongst Canadians that they are no better off today than they were a decade ago. On a household basis, ¹ real disposable income is about six percent less than was in 1981, according to Mike McCracken of Informetrica Inc. Other witnesses cited similar statistics indicating similar results.

Chart 1 presents a historical view of the Canadian standard of living. It looks at an index of real GDP per capita and real disposable income per capita, both using the year 1971 as a base. This chart shows disposable income growing faster than GDP through the 1970s and 1980s. In this decade, on the other hand, disposable income declined while GDP has recovered. Such a protracted decline in disposable income shows clearly the financial pinch faced by Canadian families in the 1990s — they have less ability to purchase goods and services in the marketplace than they did a decade ago.



Canada-United States Comparisons

The standard of living is calculated in most countries as the ratio of GDP to population. This is not a perfect measure. Nevertheless it is the one measure that is easiest to calculate and largely free of value judgments. It measures the



Our GDP per capita remains unchanged at 78 per cent of the U.S. level in 1998.

The Conference Board of Canada, Performance and Potential 1998



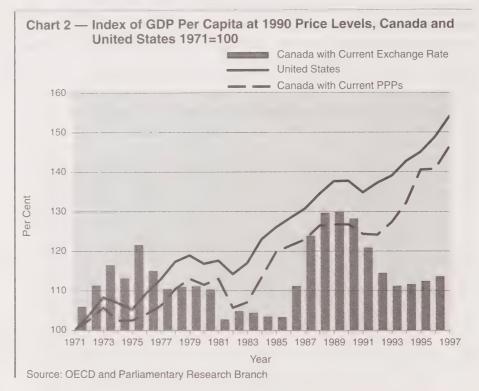
Trends in income per household will be affected not just by trends in income per capita, but also by changes in the average size of households.

Our failure to match the American rate of growth in living standards over the 1990–97 period was due about equally to relatively weaker productivity, relatively weaker reduction in the unemployment rate and relatively weaker labour force participation.

Dale Orr

flow of resources available for current consumption and investment – the ability of an economy to provide the goods and services that are demanded by its citizens.

Over the past two and one—half decades, the American economy has been able to provide a higher standard of living for its citizens than has the Canadian economy. Chart 2 compares GDP per capita for Canada and the United States. Using 1971 as a base,² Canadian GDP per capita expressed in constant American dollars had only increased by 13.7 percent by 1997. (Canadian GDP is converted into American dollars on the basis of exchange rates, shown as the bars in the chart.) It had increased by 30 percent as of 1990 but the recession, and more importantly, the relative decline in the value of the dollar has caused this measure of our standard of living to fall. By contrast, the American GDP per capita grew by 54 percent since 1971.



While it is common to see media reports making such comparisons, these trends are in large measure subject to the very large changes that have been experienced in exchange rates, and do not reflect well changes in the standard of living. If, instead of using exchange rates, purchasing power parity (PPP) is used, the trends in standards of living are more equal. Not only do we see the growth of Canadian GDP per capita tracking more closely that of the United States, the gap between the two countries actually narrowed in this decade. This is in sharp contrast to the conclusion drawn from GDP measures based on exchange rates, which show a dramatic divergence.

These charts set 1971 GDP levels at 100. This does not mean that Canada and the United States had the same GDP per capita levels in that year. This technique is used merely to compare cumulative growth in the various economies over time.



Purchasing power parity is a technique that enables data for different countries to be examined on a comparable basis. This concept compares the cost of purchasing a standard basket of goods and services in a variety of countries. It recognizes that many goods and services are produced and consumed locally. While the exchange rate is important for Canadians who wish to travel to the United States or to import goods from the United States, they do not always do so. Instead they consume goods and services, equivalent to the goods and services consumed by Americans, but which are supplied locally.

In 1997, on the basis of purchasing power parity, one Canadian dollar was worth approximately 77.7 cents American. In other words, if an American purchased a bundle of goods and services in United States that cost \$100 US, a Canadian wishing to purchase the same bundle of goods and services in Canada would have to pay \$129 Cdn. The Conference Board of Canada estimates that the Canadian dollar is today worth 87 cents US, on the basis of purchasing power parity, suggesting that it would cost only \$115 Cdn to purchase here what it cost an American \$100 US to purchase in the United States.

Using purchasing power parity to compare international standards of living indicates that the Canadian standard in 1997 was 46.4 percent higher than in 1971. The American standard of living grew by 54 percent over the same period of time. On this basis, the Canadian standard of living grew faster in the 1990s than did the American standard of living. This is not consistent with the conventional wisdom.

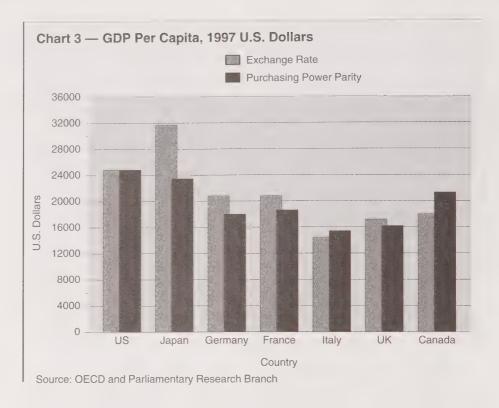
Not only does purchasing power parity significantly alter the trends over time in standards of living, it also affects the relative levels. Using the exchange rate suggests that, in 1997, the standard of living of the Japanese was substantially higher than that of Americans. On the basis of purchasing power parity, however, the Japanese standard of living was slightly below that of Americans. This result is not surprising given the high cost of living in Japan.

Moreover, the external value of the dollar suggests a lower standard of living in Canada than is actually the case. More than one—half the gap between American and Canadian standards of living disappears when purchasing power parity is used instead of the exchange rate. (See Chart 3) The Canadian level also improves in relationship to other G–7 countries.

It is important to realize just what the previous charts are telling us. Chart 2 looks at trends since 1971. Even though the Canadian GDP per capita growth has not been much below its American counterpart since 1971, it masks the fact that a large gap existed at that time, one which the Canadian economy has failed to close. According to the Conference Board of Canada, Canadian GDP per capita, measured on a purchasing power parity basis, is still about 80 percent of its American counterpart. There is no evidence, according to the Conference Board, that this will change in the near future.

Industry Canada also presented the Committee with estimates of the gap in the standard of living of Canadians and Americans, expressed in Canadian





dollars. This gap is estimated to be between \$7,500 and \$8,750 in 1998, depending upon the way in which it is measured.

It is important to distinguish between our standard of living and changes in our standard of living. Over the past 25 to 30 years, our standard of living has been growing at a rate slightly below that of Americans. Thus we are becoming slightly worse off than our neighbours to the south. Our actual standard of living, however, is substantially below that of Americans. Industry Canada estimates the gap at between \$7,500 and \$8,750 Canadian, per capita. This gap has existed for many years and can only be closed if our rate of growth exceeds that of United States over a prolonged period of time.

Measurement is important in this, although it's important to remember that measurement is backward—looking, it's not forward—looking, and that is a significant

problem.

Rick Harris

Productivity

In last year's pre-budget consultations report, *Facing the Future:* Challenges and Choices for a New Era, the House of Commons Standing Committee on Finance called for the establishment of a Productivity Covenant by the federal government. The rationale for this was the belief by the Committee that Canada was experiencing a decline in productivity growth. As evidence of this, it was noted that not only had productivity been growing in the 1990s at a substantially lower rate than in earlier decades, but that our performance in this decade lagged behind that of the United States. This was particularly true in the manufacturing sector.

From 1990 to 1999, Canadian labour productivity growth in the manufacturing sector exceeded that found in the United States for only three



of the years, according to data presented by the Conference Board of Canada. In the other seven years, American productivity grew faster than in Canada, and in several of those years the difference was significant. Indeed, the cumulative effect shows that productivity in the American manufacturing sector grew 40% faster than in Canada, a compound annual growth rate of 3.1 percent in the United States vs. 2.2 percent in Canada.

Looking beyond the manufacturing sector to the economy as a whole, the data suggest that labour productivity has grown in Canada at a rate not much different from that in the United States. Nevertheless, the rate of growth in the 1990s is substantially below that of the 1960s.

Our Standard of Living: the Role of Productivity

Put simply, our standard of living is determined by the quantity of inputs we use in the production process and the efficiency with which we use those inputs. Productivity is a measure of that efficiency. If productivity is low, then we must use more inputs to maintain our standard of living. More of us must be working or we must be working longer hours. On the other hand, if productivity is high, we can maintain our standard of living while at the same time enjoying more leisure.

On average, Canadians are not as well off as Americans – this fact is well–known. The size of the gap, and its persistence over time, is not as well known. Industry Canada estimates the gap at about 25 percent in 1998, measured on the basis of GDP per capita, which is approximately where it stood in 1961. This differential, of course, varies over time. In the 1980s, and especially in the 1990s, there has been a marked deterioration in Canada's relative standing vis–à–vis the United States.

The standard of living comprises three basic elements. Mathematically, it is the product of the rate of productivity, multiplied by the employment rate, multiplied by the participation rate. Productivity is the ratio of GDP to the number of employees, adjusted to take into account changes in the average number of hours worked.³ The employment rate is measured by the proportion of the labour force that is actually employed, i.e. it is merely the inverse of the unemployment rate.⁴ The participation rate, on the other hand, simply measures the proportion of the population that is in the labour force.

Productivity is not a concept that is easily understood. Professor Rick Harris put it in context by explaining what productivity is not. "Productivity is not consumption. Productivity is not incomes. Productivity is not wages, it's not profits, it's not employment. It's some measure we have about how

...the overall slowdown in living standards in the last 25 years is to a large degree related to our slower productivity growth.

Andrew Sharpe



Often, productivity measures use as a denominator the number of hours worked. As long as there is no tendency towards greater part-time or full-time employment, using the number of employees gives an accurate measure of productivity levels and changes.

⁴ This is the convention used by Orr and Dugan. Frequently the employment rate refers to the proportion of the working–age population that is employed.

But productivity is not the be all and end all.of economic life. Basically the goal is to improve the quality of life of Canadians and that's a much, much broader concept than, say, GDP per worker or GDP per capita.

Andrew Sharpe

efficiently we produce whatever it is we produce...it's a measure of how efficiently the economy uses its resources to produce goods and services."

Thomas d'Aquino of the Business Council on National Issues (BCNI) put it even more succinctly when he described productivity as "...the value of goods and services produced in relation to the time, money and resources used to produce them. Canada's productivity performance determines how much a Canadian can make for a day's work." Productivity, according to Jim Stanford, "...involves getting more things, not getting less of things."

While this may seem simple enough, it has become evident to the Committee that the issue of productivity is not well understood. This point was stated well by Peter Smith of the Aerospace Industries Association of Canada, when he said that many Canadians do not understand "...the direct link between productivity and our standard of living. Without a fundamental understanding, it is impossible for many Canadians to recognize the productivity challenge facing Canada today. The result is a disturbing level of complacency that if left unchecked will relegate Canadians to even lower and lower standards of living."

While productivity is clearly a determinant of the standard of living, it is not the same thing. Indeed, it is only one element that determines the standard of living. This confusion was evident in some of the testimony before the Committee. For example, some witnesses made a sharp distinction between productivity growth in industries or firms where employment was expanding, and those in which it was contracting, arguing that productivity gains in stable or contracting industries did not enhance the productivity of the economy. This is not so. Productivity measures the efficiency of the production process. We measure productivity by considering resources that are actually employed. We do not include those resources that are not being employed. Consequently, productivity gains in an industry where employment contracts will enhance economy—wide productivity in the same way that productivity gains in expanding industries will enhance economy—wide productivity. They may not, however, directly enhance our overall standard of living, as measured by GDP per capita.

Productivity, while an important determinant of our standard of living, should not be considered an end in itself. In other words, we should not seek to enhance productivity simply for the sake of enhancing productivity. An example put forward by Fred McMahon illustrates this. Consider the case of social assistance recipients who now find themselves with jobs. These are likely to be low–paying, low–skilled, low–productivity jobs. The average level of productivity for the entire economy will decline. The standard of living will, however, increase. If enhancing productivity, rather than enhancing the standard of living of Canadians, is a goal, such a move would be seen as counterproductive. Good sense, however, would suggest that the opposite is in fact true.

McMahon further suggested that such an example might explain part of the apparent gap between productivity growth in the United States and in European countries. The United States has been creating jobs over a wide



range of skill levels. European countries, on the other hand, have not been creating jobs and low–skilled workers have been shut out of the job market. This makes European productivity look good but it does nothing to enhance the standard of living of Europeans.

According to the Centre for the Study of Living Standards, labour productivity is the relevant measure if we are interested in the impact on standards of living. This measure tells us "...how much is produced by each worker and hence how much real income there is to be distributed among the population." Andrew Sharpe reiterated this point before the Committee. There was, however, no consensus. Professor Harris felt that total productivity growth was more important in terms of dynamic gains to the economy. In his view, investment affects total factor productivity, not just labour productivity. Stewart Wells of Statistics Canada agreed with him, while Professor Erwin Diewert tended to agree with Sharpe.

Short-run and Long-run Effects

According to a study by Dale Orr and Bob Dugan, ⁶ the recent poor performance of the Canadian standard of living was due almost entirely to poor labour market performance. From 1990 to 1997 labour productivity grew by almost one percent per year. It was the decline in the participation rate and the employment rate that constrained increases in the standard of living to about 0.5 percent per year. This contrasts to the experience of the 1980s when the standard of living was increasing by about 1.7 percent per year due to productivity growth in excess of one percent per year and an increase in a participation rate of more than 0.5 percent per year.

Productivity growth in the 1990s is only slightly lower than it was in the 1980s. The growth in the standard of living, however, is much lower and three–quarters of this decline is due to the reduction in the participation rate.

Productivity is measured by GDP per person employed. The denominator merely measures the inputs that go into the production process. During a business cycle, inputs are not necessarily varied proportionately to output – this is especially true of employment. Consequently, labour productivity will vary over the course of the business cycle, even though no fundamental changes have taken place in the production process. Productivity declines sharply as the economy moves into recession and it grows as the economy starts to recover.

In the short run, labour productivity is a residual. Output grows by a certain amount, labour inputs adjust only slowly to output growth, and as a result labour productivity can go up or down. In the long run, however,

The most important reasons for Canada's weak standard of living performance were related to weak employment performance.

Dale Orr



⁵ Centre for the Study of Living Standards, *Productivity: Key to Economic Success*, page 9.

Dale Orr and Bob Dugan, Our Standard of Living—Our Productivity: How Are We Doing? WEFA Inc., 1999.

Productivity change in some broader sense of the term is very long—lived...and the process is subject to considerable lags.

Rick Harris

business firms are likely to have some estimate, or belief, as to changes in labour productivity. Their hiring decisions will then be based on forecasts of changing demand and their estimates about productivity growth. The hiring and firing decisions will then follow.

Longer-term trends in labour productivity, however, are affected by developments that extend well beyond the business cycle. The concept of labour productivity is important because it can affect output in the economy even when capacity is fully utilized. That is, the unemployment rate may be as low as it could possibly get, the participation rate could be as high as it could reasonably be expected to go, and the stock of capital could be used to the fullest extent possible. Does this mean that once the business cycle reaches its peak nothing can be done to enhance output or the rate of economic growth? Not at all.

It is at this point that innovation and technological development offer the promise of economic growth and higher standards of living beyond that which is offered by full employment. The quest for full employment, while important in the short run, provides a limit to the standard of living that the economy can provide. The quest for enhanced productivity is the means by which this limit is overcome.

Unfortunately, the public debate is often mired within the confines of the business cycle. The media understand the concept of unemployment, and these statistics are reported monthly. They are less comfortable with the concept of productivity, whose statistics are reported less regularly and are far more difficult to comprehend.

While Andrew Sharpe and Dale Orr concentrated on Canada's poor labour market performance in the 1990s as a factor in explaining our stagnating standard of living, Professor Harris took a longer–term view. "Productivity change is inherently a long–term change. That's just the nature of the problem. Think about human resource development. We now have a sort of compelling evidence being produced by child psychologists ...that very early childhood development is extremely important in terms of subsequent human capital formation. You literally have to have a 30 or 40 year horizon when you talk about developing those kinds of resources."

This is precisely the point raised by Dr. Fraser Mustard. He spoke to the Committee about the "real brain drain", namely literacy, low receptive vocabulary and early childhood development. Social interventions when children's brains are still malleable have the potential for enormous economic and social returns, enhancing the human capital that could be acquired by young Canadians. This would, on the one hand, enhance their likelihood of being in the workforce and increase their productivity once in the workforce. Both of these effects would lead to a higher standard of living, but only well into the future.

Maureen Farrow was the most adamant of all witnesses in distinguishing between the short run and the long run. In her view, productivity is really about the long run and as a result is not subject to any quick fixes. As she told the Committee, "I think it's very important for this Committee to distinguish between the productivity debate and the high unemployment debate and the tax debate because they are linked but one is quite short—term and productivity is really a long—term concern..."

She reiterated and reinforced this point by saying, "... Long-term productivity will help us no end in maintaining our quality of life and enjoying full employment and all the benefits that come from that."

And if we take a longer-term view, labour productivity is clearly the most important element in the determination of our standard of living. In 1998, it explained 83 percent of the income gap between Canada and the United States, according to Industry Canada. This is low by historical standards. Industry Canada calculates that lower labour productivity accounted for 96 percent of the income gap between Canada and United States over the past decade.

Productivity Levels vs. Productivity Growth

The distinction between short run and long run productivity can be thought of as the distinction between productivity levels and the rate of growth of those productivity levels. When we talk about using our capacity fully, both capital and labour, the goal is to ensure that the level of productivity is as high as it could possibly be, given our capital stock and the existing technology. But once our capacity is fully employed and productivity reaches its highest possible level, what then?

The answer lies with productivity growth, which refers to the ability of our economy to increase the measured level of productivity over time, even when our capacity is fully utilized. Thus, short run concerns can be thought of as challenges to ensure that resources are being used efficiently and fully. They are concerns about the level of productivity.

Long-run concerns can be thought of as meeting the challenge to increase productivity levels, and possibly even to increase them at ever faster rates. This is much more of a dynamic issue. It is a function not of existing technology but of new technology. It is the result of invention and innovation in science, business, education, and management techniques.

Productivity, Labour Relations and Unemployment

One of the greatest concerns about technological innovation and productivity enhancement relates to the impact that it has on the level of unemployment. Many see the increased use of labour–saving technology as a threat to employment and the standard of living of Canadian households.

Despite the fact that technology has changed substantially in modern economies over the past decades, we have actually seen an increase in the proportion of the adult population working in the market economy. Consequently, it is not at all clear that new technologies pose any kind of threat

I think that productivity growth, correctly measured and correctly targeted, involves improving standards of living, improves growth, involves getting more of things, not getting less of things.

Jim Stanford



So we believe that this relationship at the workplace level is absolutely pivotal to obtaining productivity improvements and it's a factor that is almost always neglected. We talk about the need for training; we talk about the need for investment; we talk about the need for good technology but how often do you hear people talking about the need for better labour-management relations at the workplace level to stimulate productivity? Only when there are strikes.

Shirley Seward

to employment opportunities. Instead, what they are likely to do is to change the nature of work and the labour market skills that are required of workers. This changing nature of work can, on the one hand, increase the opportunities and job satisfaction of workers while, on the other hand, relegating low skilled workers to poorly paid occupations. As evidence of this, Garnett Picot of Statistics Canada informed the Committee that about 60% of the jobs created in the 1990s were professional or managerial, whereas there was virtually no growth in blue—collar jobs.

The increasing use of technology tends to have a positive impact on employment in the service sector. Even such labour saving technologies as automated teller machines, computers, price scanners, etc. may displace workers directly but enhance the demand for services through the creation of higher incomes. This additional demand follows from the fact that the demand for services increases more than proportionately with increased incomes. Thus, according to the OECD, there is a positive relationship between employment and information technology investment.⁷

Professor Richard Lipsey speaks about the need to implement changes in the organization of production. According to him "in more and more industries, rigid job descriptions are becoming obsolete. Effecting the required changes in the organization of labour is proving yet another conflict—ridden process, as occurs with many changes that must be made in the facilitating structure in response to technological change." Engineering and physical sciences are vital to technological progress, but the same is true of management science, including human resources management.

The importance of human resources management was indicated to the Committee by witnesses from the Canadian Policy Research Network and the Canadian Labour Market and Productivity Centre. Canadian firms do not appear to see the value of innovations in labour—management relations. Approximately 70 percent of establishments are still managing their human resources in traditional ways. Shirley Seward of the CLMPC indicated that we would be misguided if we think of labour—management relations only in terms of days lost to strikes. In her view, it is "...the day—to—day interaction between business and labour at the workplace level and the kinds of things that they do cooperatively," that affects labour productivity.

Lipsey goes on to say that labour is now in intense competition in a globalized market. What is now important is human capital. Consequently, it is important that individuals acquire the skills that are required to form this human capital.

The Canada-United States Productivity Gap: Is It For Real?

In January of this year, the Centre for the Study of Living Standards published a short report entitled *The Canada–U.S. Manufacturing*

⁸ Richard G., Lipsey, *Economic Growth, Technological Change, and Canadian Economic Policy*, C. D. Howe Institute Benefactors Lecture, 1996, p. 25.



⁷ OECD, 1998, p. 51

Productivity Gap: An Overview. This document examined the trends in manufacturing productivity between the two countries. It concluded that the gap between Canada and United States has not narrowed and indeed has widened significantly. Since 1981 manufacturing productivity in the United States grew by 3.2 percent per year compared to 1.9 percent per year in Canada. The already poor productivity performance in Canada deteriorated sharply in the 1990s so that by 1996 our level of productivity was only 72 percent of that found in the American manufacturing sector.

This was a continuation of a trend that started in the early 1980s. This conclusion was based on labour productivity measures but if total factor productivity was considered the results were essentially the same. What is also of concern is the fact that productivity growth in manufacturing was better than that found in the economy as a whole. And finally, for the period 1981 to 1996, Canada's productivity performance was substantially below that of other G–7 countries, amounting to only 60 percent of the G–7 average.

The report did find this result somewhat surprising. Nevertheless, it suggested several reasons for it. In the first place it found that the American productivity growth was almost entirely the result of developments in the high–tech sector. That sector accounts for a much larger share of the American economy than it does in Canada. If this sector is excluded, the Canadian performance actually exceeded American productivity growth.

The second explanation for the differential was a relatively weak performance of the Canadian economy. Output growth increases productivity because it enables firms to use their capacity more fully, enjoying economies of scale through long production runs. With capacity being underutilized, there is generally little incentive to seek productivity gains.

In addition it was suggested that Canadian firms do not embrace new innovations to the same degree that American firms do. (See Chart 4) This chart compares the rate of technology utilization by American and Canadian manufacturing firms, by size, for 1989 and 1993. It demonstrates that the rate of technology utilization by Canadian firms has increased over the four—year period under examination. Large Canadian firms invest in new technology at about the same pace as do large American firms. Small Canadian firms were the technological laggards in 1989 but they have significantly increased their use of technology, and consequently the Canadian average grew.

We tend to think of research and development as something that is undertaken by large firms, research institutes, government laboratories, and universities. Small businesses also need to innovate to improve their products, their manufacturing processes, and services they provide. In the view of the Association of Canadian Community Colleges, our current approach is "... missing the mark when it comes to the innovation needs of Canada's small and medium enterprises."

Pierre Killeen spoke about community colleges as unique institutions designed to enhance the economic development of local communities, including the small-business community. These colleges are themselves

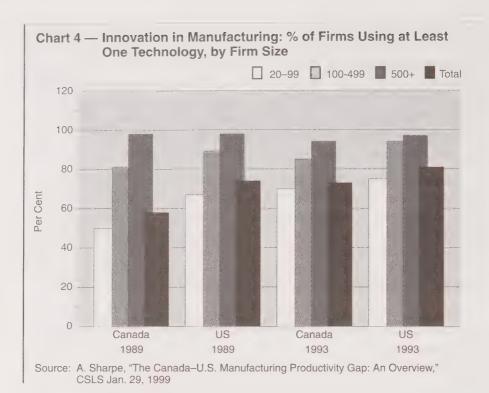
... in the immediate post war period we had the second highest productivity level to the United States within the OECD.

Andrew Sharpe

...from the research that I've seen from others, U.S. small—size firms are a lot more dynamic ...they move a lot more quickly to become mid—size firms.

Daniel Schwanen





entrepreneurs as they offer their services on a fee basis, providing valuable assistance to SMEs.

The CSLS report also suggested that human capital in Canada was as good as human capital in the United States. By the measures of enrolment in post–secondary education, adult literacy rates, or spending on manpower training, Canada compared favourably to the United States.

More recently, the CSLS published another study entitled "New Estimates of Manufacturing Productivity Growth for Canada and the United States." This report, using a slightly different set of data, found that recent productivity growth was virtually identical in the two countries. Only in manufacturing was there a significant difference.

Like the earlier study, this report found that American productivity growth in manufacturing was almost exclusively limited to two sectors, the industrial machinery and electronic sector and the other electronic equipment sector – i.e. what is generally referred to as the high–tech sector. According to data provided by Statistics Canada, developments in the American high–tech sector are quite startling. From 1990 to 1995, multi–factor productivity in the American electrical and electronic products sector grew by more than 8 percent per year whereas it grew by only 1.5 percent per year in Canada. In commercial and industrial machinery the American productivity growth rate was still almost twice that of the Canadian productivity growth rate, almost 4 percent versus just over 2 percent.

Growth in total factor productivity was actually higher in Canada than in the United States, contradicting the results published in the earlier study.



Therefore, the Centre concluded, that it might be premature to start looking for explanations of the difference between Canadian and American productivity growth rates, when such a difference might not exist.

The fact that American productivity growth in the manufacturing sector is concentrated in the high–tech sector should not be reason for complacency. If this concentration suggests some kind of data or measurement error, that is one thing. If, on the other hand, it indicates that fast–growing sectors tend to locate in the United States rather than Canada, that is a matter of concern.

It now appears that the Canadian productivity performance has not been as gloomy as has previously been thought. Recent revisions to the System of National Accounts indicate that productivity growth in much of the 1970s, 1980s, and 1990s has been fairly consistent, although still substantially below that experienced prior to 1973. Moreover, it is now widely recognized that the OECD statistics miscalculate Canadian productivity growth because they use employment rather than hours worked as an input. This totally misrepresents productivity trends because it fails to take into account the growing incidence of part–time employment.

Nevertheless, although the gap in productivity growth rates between our two countries is not as large as was previously thought, even the revised statistics show sharply accelerating growth in American productivity in the middle of this decade.

Although productivity growth in Canada has not been significantly different from that of United States in the last two decades, there is still a gap between productivity levels in Canada and United States. According to Andrew Sharpe, this gap is about 20 percent of GDP and has not changed since about 1973. This conclusion was shared by many of the witnesses who appeared before the Committee.

Statistical Mis-Measurement

There are several reasons why official measurements of productivity, and productivity growth, may be misleading and why international comparisons may give a false picture. In the first place, Canadian productivity statistics look only at the business sector, ignoring therefore the government sector, and health and education. In other countries, notably the United States, education and health are more likely to be provided by the private sector and, hence, included in productivity measures. It is not clear, however, just how this distorts the apparent productivity gap between our two countries.

Nevertheless, it is clear that official statistics have not kept pace with the changing nature of the economy. As stated by Professor Diewert, "... the statistical system is still mired in the structure that was started or worked on in the '40s and '50s and the whole statistical system hasn't moved to better coverage of services." Some of these specific issues will be dealt with later in the report.

I think we need to get a better grip of what it is we want to achieve. We don't want to beat the Americans on some particular statistic. We want to improve the quality of life for people in Canada.

Fred Bienfeld



PRODUCTIVITY WITH A PURPOSE

... different types of deflation techniques can have dramatically different effects on rates of growth of what we're measuring.

John Baldwin

This mis—measurement can occur as a result of several factors. As John Baldwin of Statistics Canada pointed out, productivity estimates can be thought of as being at the top of the pyramid, and will contain all of the errors that are found in the component parts. Secondly, these estimates can be highly sensitive to the way in which nominal statistics are deflated so as to calculate real output.



WHAT ARE THE FORCES BEHIND RECENT PRODUCTIVITY TRENDS?

As noted above, there has been a very clear decline in the last three decades in labour productivity growth in Canada, the United States, and other industrialized countries. Several factors have been identified as the causes of this decline. They include such things as a decline in the rate of capital accumulation, the growing importance of the service sector, a lack of technological progress in certain industries, and the increasingly–regulated nature of industrial economies.⁹

Capital Accumulation

The rate of growth of real, business, non–residential investment has declined over time. In the 1970s it grew by more than 8 percent per year falling to 3.2 percent in the 1980s and down to just over one percent in the first half of the 1990s. This followed the trend with respect to growth. When the economy was performing briskly, investment rates were high. Now that growth rates are lower, so is the rate of investment.

The OECD publishes national accounts statistics for member countries. According to the statistics, net investment, i.e. gross investment less depreciation, has seen a significant decline. In the 1970s it was in excess of 10 percent of GDP and reached a peak of 14.7 percent in 1974. In 1990s it has been in the range of 5 percent to 6 percent of GDP.

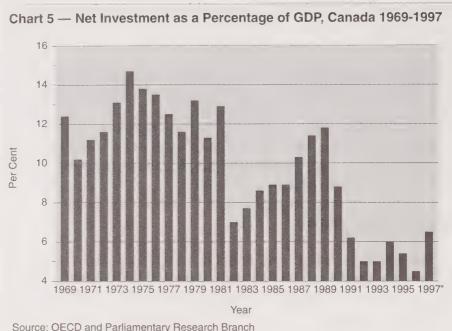
This trend is portrayed in Chart 5. It does not show the entire picture, however. Jim Stanford also presented the Committee with data on investment, expressed as a proportion of the existing capital stock. Whereas net investment averaged about 5 percent of the capital stock in the 1960s and 1970s, there has been a steady decline in the past two decades. It is now in the neighbourhood of 2 percent to 3 percent of GDP.

The implication of this is a failure to see the capital—labour ratio grow. It is this ratio that enhances labour productivity because it gives workers more and better tools with which to work, and the new capital often has newer technology embodied in it. Today, the Canadian capital—labour ratio is not much higher than it was in 1982. By contrast, the American capital—labour ratio is about 15 percent higher.

Mike McCracken reported a similar trend with respect to real, gross, government fixed investment. Whereas that investment amounted to close to 5 percent of GDP in the middle of the 1960s, government investment effort is now about one-half as great.

⁹ R. Salgado, "Productivity Growth in Canada and the United States," Finance & Development, Dec. 1997.





Source: OECD and Parliamentary Research Branch

The Increasing Importance of the Service Sector

Today, about two-thirds of total GDP and three-quarters of total output originates in the service sector. Fifty years ago, only one-half of GDP was accounted for by services. As measured productivity growth in the service sector has historically been less than in the goods producing sector, some analysts suggest that this change in the composition of output is an important factor in explaining our declining productivity growth trends.

As noted earlier, much of the American productivity growth has been concentrated in the high-tech sector. This is not surprising, nor is it unique to the United States. A recent report by the OECD compared labour productivity growth in various sectors of the economy and concluded that productivity grew fastest in the high and medium-high technology industries followed by manufacturing, all industries, and the service sector, in that order. The gap between services and high-technology was substantial everywhere, over the period 1980 to 1995.¹⁰

According to a study by the Bank of Canada, productivity growth in the goods-producing sector was almost twice as high as that in the service sector for the three decades ending in 1994. ¹¹ More recently, the gap between the two sectors has narrowed but that has been because of the declining rate of productivity growth in the goods sector.



OECD. Technology, Productivity and Job Creation -**Best Policy Practices**



¹⁰ OECD, Technology, Productivity and Job Creation – Best Policy Practices, 1998, p. 46.

¹¹ Dinah Maclean, "Lagging Productivity Growth in the Service Sector: Mis-measurement, Mismanagement or Misinformation?" Working Paper 97-6, Bank of Canada.

Why is measured productivity growth in the service sector so low? One obvious answer is that the service sector is very labour—intensive and hence cannot make use of increasing amounts of new, and better, capital the way the goods—producing sector does. There are only so many haircuts that a barber can give in one day, for example. This view, however, fails to recognize the very heterogeneous nature of the services sector and the types of services that are increasingly being provided.

The communications sector has experienced the highest growth rate of any industry. There, productivity has grown by almost 6 percent per year from 1961 to 1994, which is twice as fast as the growth in the goods–producing sector.

The communications sector however is clearly an anomaly. Surprisingly, the finance, insurance, and real estate sector displays some of the poorest productivity performance among service industries in the economy as a whole. While these data do not go beyond the year 1994, they nevertheless pertain to a period of time in which the sector was undergoing dramatic change, investing in computer and information technology on a very large scale. Indeed, it has engaged in the greatest accumulation of computer–related capital of any sector in the economy. Yet for the period 1981 to 1994, when many of these changes were taking place, productivity per person grew by only one–tenth of one percent per year.

One of the problems with measuring productivity in the service sector is the fact that it is extremely difficult to measure a unit of output. Even more important is the fact that quality changes cannot be measured easily. Given these two difficulties, many analysts suspect that the productivity measures calculated for the service sector are inaccurate and, more likely than not, underestimate the rate of productivity growth. Again, the financial sector is a good place to look. This sector has not only changed the way it operates, through the large–scale introduction of computer and telecommunications equipment, it has dramatically changed the nature of the products that it produces. Canadians now have 24—hour access to their funds and to credit, from almost anywhere in the world. They can pay their bills from the comfort of their home by phone or by computer. They can trade stocks on the Internet and the cost of such transactions is only a fraction of what it was a decade ago.

It is unlikely that the productivity measures have been able to keep pace with these changes. The substitution by consumers of mutual funds for bank deposits is one example of this. Banks are increasingly earning their revenue on the basis of fee for service rather than interest rate spreads, yet it is this latter variable upon which productivity is measured.

Official statistics sometimes merely assume that a service sector has no productivity growth. For many services, output is measured by hours of input, and as a result productivity cannot grow. ¹² This is as true of Canada as it is of

...the controversy around productivity growth records should not be allowed to distract us from the critical need to improve our performance. I think there's consensus around that.

Jim Frank

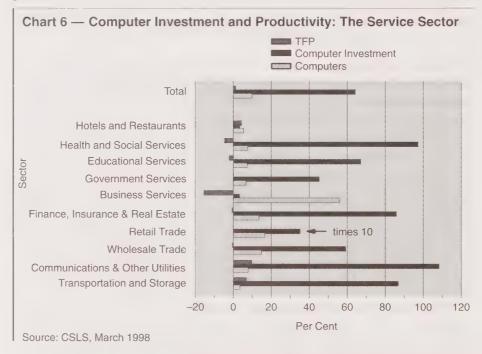


Michael R. Darby, "Causes of Declining Growth," *Policies for Long–Run Economic Growth*, Federal Reserve Bank of Kansas City, 1992, p. 6.

the United States. Output is estimated on the basis of operating costs for such institutions as credit unions, Investment Funds, and the Bank of Canada. ¹³

Another possible source of mis—measurement relates to the way in which productivity is calculated in the computer sector. The Bank of Canada report suggests that the way productivity indices are constructed in Canada may "upwardly bias the output of computer manufacturing at the expense of computer—using industries..." This potential mis—measurement could be serious for the banking sector because of its heavy investment in computer equipment. In 1991, investment in computers accounted for 43 percent of total investment in machinery and equipment in the trade, finance and business services sector. This was far higher than in any other sector of the economy.

Chart 6 examines the service sector and attempts to establish a link between investments in computer and information technology and total factor productivity growth. The chart looks at three variables. The series "computers" refers to the proportion of total investment in 1995 that was dedicated to computers. The series "computer investment" refers to the relative change in the real stock of computers over the period 1992 to 1995. The series "TFP" refers to the growth of total factor productivity over the same period.



This chart offers a very negative portrayal of the role of computers in productivity growth.

The American government statistics on service sector output and productivity are subject to the same kinds of measurement errors that plague

¹⁴ *Ibid.* p.14.



Dinah Maclean, "Lagging Productivity Growth in the Service Sector: Mis-measurement, Management or Misinformation?" Bank of Canada, Working Paper 97–6, p. 14.

Canadian statistics. The American banking industry has embraced new technology in the same way that the Canadian banking industry has. Nevertheless, official statistics show that American banks today are only 80 percent as productive as they were in 1977. Few who study the industry could accept such conclusions.

Furthermore, the technological investments that have been made over the past decade largely exclude Internet—related investments. Yet it is with respect to the Internet that a large part of today's high—tech investments are being made, and where dramatic innovations are expected in the future. Thus, if it is true that the productivity benefits of information and computer technology appear only with a lag, then it is entirely possible that even greater productivity gains can be expected in the near future.

The Special Case of Computers, Information Technology and Productivity

One of the perplexing questions about the impact of increasing computerization of the economy relates to the apparent absence of any significant, measurable benefits for productivity. Not only are businesses spending large amounts on investments in computers and information technology, without any significant increases in productivity, but those sectors of the economy that are the most intensive users of information technology seem to be performing most poorly. The Centre for the Study of Living Standards¹⁵ addresses this issue and recognizes that there may be a problem with respect to the measurement of output in the service sector. It does not consider however the possibility raised by the Bank of Canada study, namely that productivity might be measured correctly but attributed to the wrong sector.

Three possibilities are most commonly offered to explain this paradox. In the first place, it is possible that computers are having the expected effect but that statistical measures are not able to capture these effects.

A second explanation relates to the lags that exist between the introduction of new technology and the emergence of its beneficial effects. All major technological changes require a long period of time during which the new technology is diffused throughout the economy and users learn how to employ it effectively and efficiently. Sometimes this takes decades.

Finally, it is argued by some sceptics that the value of computers and information technology in the workplace has been vastly oversold. This technology is expensive, it requires a great deal of training, and its possesses the potential to disrupt the workplace.

The CSLS concludes that a priority area for the government should be the development of better output measures, especially for the service sector. The Committee concurs with this conclusion, having heard similar sentiments from numerous witnesses.



Official statistics show that American banks today are 80 percent as productive as they were in 1977.



¹⁵ A. Sharpe, Productivity: Key to Economic Success", pp. 31–33.

Evidence of Benefits from High Technology

In the United States, some economists are now accepting the fact that high—technology does indeed have the potential to enhance productivity. They cite the fact that productivity has been picking up in recent years, well into the current business cycle. Typically, the big productivity gains tend to occur early in the business cycle, when output is growing but firms are not yet rehiring.

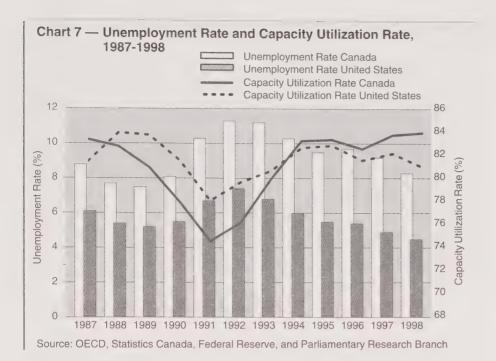
The reason for this, as some economists at the U.S. Federal Reserve Board are now suggesting, is that computers had little positive impact on productivity early in this decade but that they are now contributing significantly to growth. The Chairman of the Federal Reserve Board, Allan Greenspan, is now referring to "higher, technology–driven productivity growth." It is possible therefore, that the lagged–benefits hypothesis is indeed a valid one.

As Chairman of the Federal Reserve Board, Greenspan is naturally concerned about inflation. When he speaks about growth, he always considers how it affects capacity utilization and therefore inflationary pressures.

Since 1994, the American unemployment rate has continued to decline, yet the rate of capacity utilization has been falling. In Canada on the other hand, the capacity utilization rate has been growing alongside falling unemployment. Even though the Canadian unemployment rate is much higher than the American rate, our measured rate of capacity utilization is about 4 percentage points higher than in United States. This result is worrisome. From a business cycle point of view, this suggests that the American economy has the capacity to expand more than the Canadian economy even though our unemployment rate is much higher. (See Chart 7.)

Daniel Schwanen, of the CD Howe Institute, cited the composition of our economy as one factor that might help to explain our relatively poor productivity performance $vis-\dot{a}-vis$ the United States. In his view, we lose up to 0.4 percent in productivity growth every year simply because our economy comprises sectors that tend to have lower productivity growth by their very nature. In other words, if the American economy had the same structure as the Canadian one, its productivity performance would be lower.









WHAT DRIVES PRODUCTIVITY AND ECONOMIC GROWTH?

According to Professor Harris, there are three primary factors that affect productivity. The first is investment. The higher the rate of investment as a percentage of GDP, the higher will be the rate of productivity growth. The second factor is human capital and labour skills. A more educated and skilled labour force enhances productivity because it allows employees to work smarter and to use newer technologies. Finally, free trade is an important determinant of productivity growth, especially for small open economies. Indeed, Harris believes that broadly-based free trade is one of the most important things that the Canadian government could do, and has done, to enhance productivity. It is this free trade that has enabled the Canadian economy to "...re-orient management, labour and the whole host of industrial practices,...integrating ourselves in this North American-based manufacturing system..."

Investment and Capital Formation

There is a wide range of evidence to suggest that productivity is linked to investment. Economies that save and invest more than other economies tend to experience stronger growth in productivity, output, and standards of living. This is not surprising. With more capital, labour productivity is higher.

But there's more. The benefits of investment often spill—over to other firms and other industries which have not made that investment. These externalities are linked to such factors as learning—by—doing, and demonstration effects. And, as noted earlier, new technology is embodied in new capital goods.

This investment is strongly affected by tax policies. Higher marginal tax rates reduce the after—tax return to capital and discourage its accumulation. Moreover, in a world of inflation, this disincentive is magnified because taxes are applied to nominal, and not real, returns. With high inflation, it is possible that the real after—tax rate of return is zero or even negative.

Investment is also affected by the economic environment in which entrepreneurs must operate. Anything that adversely affects their view of the future will discourage investment. For example, large government deficits that are viewed as unsustainable raise the spectre of future tax increases. This will discourage investment in the same way that actual tax increases discourage it.

Investment in modern capital and technology is expensive and risky. It requires a financial system that can transfer resources from savers to investors. Monetary and financial sector policy are vital in this regard to the extent that they contribute to the maintenance of a well–functioning financial system.

The role of education and human capital

There are several ways in which education could contribute to the enhanced standard of living of Canadians. The first is the obvious observation

[T]here's no single lever on which there is a consensus that we should pull in order to improve productivity. Some will emphasize reduced taxes. Others will emphasize investments in anything under the sun from early child care to research and development, to university research to whatever. I don't think we have the knowledge to quantify the impact of each of these things.

John McCallum



I think that one of the really important neglects, despite several serious tries, has been the neglect of the development of highly skilled artisans in this country, both the development of it and the respect of their role and contribution. It's not just a matter of banging people through university degrees.

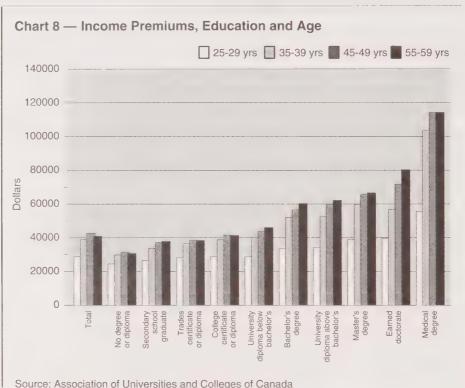
David Slater

We maintain that the way to enhance human productivity is through learning and training and that these activities ought to be the focus of government attempts to stimulate productivity. Understood in this light, the rallying call becomes "let's get learning" not "let's get productive," which most Canadians tend to equate with working harder, for less money or being replaced or being downsized.

Pierre Killeen

that those with higher levels of education have a lower incidence of unemployment and enjoy higher average incomes than those with lower levels of education. Statistics were presented to the Committee by Sally Brown of the Association of Universities and Colleges of Canada, which showed that "...the unemployment rates of university graduates in mid–career stood at 4 percent compared to 7.7 percent for high school graduates and over 14 percent for those who have not completed high school."

Chart 8, based on data supplied to the Committee by the Association of Universities and Colleges of Canada, shows quite clearly how income is related to education and age (i.e. experience). Not only do those with higher education enjoy an income premium over those with less education, this premium grows with experience. The fact that these individuals tend to be employed more often and earn higher rates of pay suggests quite clearly that their productivity is higher than that of those individuals with less education. Thus they contribute more to the economy.



Source: Association of Universities and Colleges of Canada

Education promotes the development of human capital. This capital can have relatively large spillover effects, as is noted later on in the section on the "brain drain." The existence of a well–educated workforce also affects the investment decisions of firms. With a large stock of highly–skilled workers, firms are more likely to invest in the capital that can make use of those skills. This clearly enhances productivity. Without such a pool of skilled workers, firms will choose to either make investments elsewhere or to choose technologies for use in Canadian plants that do not require such highly–skilled workers. In such a case, measured labour productivity will be lower.



The other important role of education deals with the distributional effects of economic growth. By making education available to all Canadians, economic opportunities are widely distributed amongst Canadians. Thus the distribution of income is likely to be more even in an environment in which education is publicly supported than it would be in an environment where education is only privately supported. Public support for higher levels of education and ongoing manpower training, as well as tax support for the concept of lifelong learning, therefore contribute to a more even distribution of income and wealth in Canada.

Human capital is the product of education and training. The Canadian economy can provide this human capital or it can import it. David Slater, in speaking about the post—war factors that led to our golden age of growth, recognized the importance of imported human capital when he referred to the "…very large inflow of well—trained migrants. The skills in working with stone and brick and so on that came with the Italian migrants was just fantastic. We, in fact, in this country relied for highly skilled artisans, including tool and dye makers and so on, very largely on the importation rather than generating these people ourselves."

International Trade and Competition

Trade is an important determinant of productivity growth because of the effects on competition but, as well, because it enables firms in a small economy to reap the benefits of long production runs and economies of scale that are available to firms in larger economies. Professor Daniel Trefler told the Committee that there is quite strong evidence to suggest that the Canada – United States Free Trade Agreement (FTA) did enhance the productivity of those sectors which saw their tariff protection reduced. He believes that the FTA caused those sectors to see an increase in productivity growth of one–half of one percent per year. This he thinks is a significant amount.

One of the reasons for this result is the fact that trade exposes firms to new and innovative competitors, and enables them to copy and adapt those innovations. To achieve this benefit, however, it matters with whom we trade. According to Trefler, "There's lots of reasons to want a Free Trade Agreement with say Chile...But if we're interested in productivity, we need integration with Europe, with the Germanys, the Italys, the Japans, the United States."

Competition in markets is an important element in fostering innovation and technological change. Indeed, technological progress resembles the dynamic process of competition embodied in the phrase "creative destruction."

Competition means that firms must continually strive to be better, or else they will lose market share and profits and their very survival could be in jeopardy. Competition forces firms to keep prices low, quality high, and to continually strive for new and better products, and new and better ways to produce them.

This is only possible if barriers to entry are non-existent or minimal. This means that domestic markets should be open to foreign as well as local



Government trade policies increase competition and allow countries to specialize in products they are good at making, boosting productivity and competitiveness.



The aerospace industry is a useful example of the impact of innovation on productivity and global competitiveness. The aerospace industry is a leading advanced technology sector in Canada, one of the largest R&D investors. In the last five years alone, industry sales have grown at three times the rate of Canada's GDP, fuelled by exports that have grown to 80% of our sales. However, notwithstanding this impressive performance, we still face productivity and competitive challenges from our global competitors who are investing even more in R&D and innovation.

Peter Smith

suppliers. Its means that regulations should not keep new firms, or new owners of existing firms, out of markets.

Competition helps to foster an environment in which productivity growth may emerge. As summarized by Professor Lipsey, "Competition among three or four large firms often produces more innovation but a single firm, especially if it serves a secure home market protected by trade barriers, seems much less inclined to innovate." ¹⁶

Firms exposed to competition must introduce modern technology in order to survive, especially if that competition comes from firms that engage in best practices. This is not true of firms that are sheltered from competition. Indeed, such protection allows them to survive even though they may be inefficient and employ outdated technology.

For small economies that kind of competition generally arises from international trade. Free trade has the added benefit of expanding the markets in which firms operate, and hence, enables them to achieve economies of scale that would not be possible in a small, domestic market. It is for this reason that Canadian export—oriented firms tend to have higher levels of productivity than domestically—oriented firms. In the United States, on the other hand, import competition affects productivity positively.¹⁷ This suggests that the achievement of economies of scale through the exports generated from free trade are important for productivity growth in Canada. In the United States, firms that supply the domestic market may already have achieved those economies.

Foreign direct investment is often seen as a beneficial factor for productivity growth. This is primarily because it enables economies to import technology from more technologically advanced economies. It has the added benefit of increasing competition. But when that foreign direct investment is the result of attempts by foreign firms to leap tariff or non–tariff barriers, the impact on productivity is often minimal. This confirms the oft–held view in Canada that branch plants add little benefit to the Canadian economy. Put another way, the foreign direct investment that Canada receives in a world of free trade is likely to be more economically advantageous than that which we received in a world of high tariff barriers.

Technological Progress

By international standards, research and development intensity is low in Canada, at approximately 1.4 percent of GDP.

Research and development is an important contributor to technological progress. Although Canada does not engage in a great deal of R&D, that does

¹⁸ K. Shigehara, "Causes of Declining Growth in Industrialized Countries," in *Policies for Long–Run Economic Growth*, p. 30.



Richard G. Lipsey, *Economic Growth, Technological Change, and Canadian Economic Policy*, CD Howe Institute Benefactors Lecture, 1996, page 4.

Dirk Pilat, "Competition, Productivity and Efficiency," *OECD Economic Studies*, No. 27, 1996/II, p. 124

not mean that, as a nation, we cannot take advantage of research undertaken elsewhere. There is some question, however, as to our ability to adapt and use such imported research. There tends to be a positive relationship between the amount of research undertaken locally and the ability to exploit research.

This relationship is stronger in a world of increasing specialization. This is due to the difficulty of importing ideas. To adapt the research of others to local conditions requires a strong understanding of the technology, understanding why it works, and knowing its limitations. This is especially true of management and organizational innovations. American auto—makers, for example, faced numerous problems when they tried to adapt Japanese management techniques to their own domestic plants. ¹⁹

Thus, technological progress is about more than scientific research and development. It is very much about institutions and the way in which we organize our political and economic way of life. A classic study of economic history, entitled *How the West Grew Rich* has concluded that societal attitudes that accept change are necessary conditions for technological progress to take place. According to that study, societies grew rich because they were "...willing to tolerate and accept social and political change... The West has grown rich, by comparison to other economies, by allowing its economic sector the autonomy to experiment in the development of new and diverse products, methods of manufacture, modes of enterprise organization, market relations, methods of transportation and communication and relations between capital and labour."²⁰

History shows us that economic growth is not simply about achieving efficiency in a static sense. Nor is it purely a matter of using more labour or more capital. Economic growth is much more about changes in technology, allowing us to produce new goods and services and produce them in new and innovative ways. It is about invention and innovation, scientific experimentation and new management techniques. And what is becoming increasingly evident is the fact that the rate of economic growth is not just a result of factors beyond our control. It is something we can affect by government policy. In the words of economists, growth in modern economies is endogenous. While we cannot control it completely, we can encourage it by a set of appropriate policies.

Technological progress is as much about the adoption and diffusion of existing knowledge as it is about the creation of new knowledge. Canada is a small economy on the world stage. There is much to be gained by learning from what others have discovered and using their discoveries. The diffusion of technology enables individual firms to make use of the existing stock of

We have a number of multinational enterprises, such as Nortel, Pratt & Whitney, Frosst, ...three of those companies account for 44% of the R & D in Canada.

Arthur J. Carty



Peter Howitt, "Endogenous Growth Theory: Taming the Winds of Change, or Tweaking Neoclassical Economics?" In Thomas J. Courchene, Editor, Stabilization, Growth and Distribution: Linkages in the Knowledge Era, The Bell Canada Papers on Economic and Public Policy, 1994, Page 133

Nathan Rosenberg and L.E. Birdzell, Jr., *How the West Grew Rich: The Economic Transformation of the Industrial World*, Basic Books, Inc., New York, 1986, p. 332.

Canada is the number two country in the world in biotechnology in terms of absolute numbers of companies. This to me is absolutely staggering. We're a small country. We're a tenth the population of the United States and yet they're the only country in the world ahead of us in terms of numbers of companies in existence.

Barry McLennan

In fact, many of the heavily taxed countries of continental Europe have generated better long-run productivity growth than the low-taxed U.S.

Jonathan Kesselman

scientific knowledge. For them it does not matter whether that knowledge was developed in Canada or elsewhere.

We have in Canada a very interesting example of a high–tech sector that appears to be very successful yet is not able to make use of government programs that help to diffuse technology. The biotechnology sector in Canada is very successful by world standards. We have the second–largest biotechnology sector in the world. Yet Technology Partnerships Canada (TPC) appears to have passed this sector by. According to Dr. Barry McLennan, TPC has funded 70 projects in the past few years but only two have been in the biotechnology sector.

The Role of Taxation

The link between taxation, economic growth and the standard of living has recently become the subject of policy debate. With higher levels of taxation, the disposable income of families declines and thus there appears to be a link between taxes and the standard of living. This is the popular view of the relationship between the standard of living and taxes. By providing tax relief Canadians would have more disposable income and thus be able to purchase more market goods.

According to Professor Jonathan Kesselman of the University of British Columbia, this view is too simplistic. He sees tax reform as the route to the achievement of three goals. In the short run, tax reform would promote economic efficiency by improving the allocation of resources. Next, it would promote the expansion of employment and in the long—term it would enhance productivity. In his view, reforming the tax base is more important than cutting tax rates.

The more appropriate way to link taxation to the standard of living is the manner in which it affects the incentives faced by individuals and corporations. What is important is not just the level of taxation but the composition of those taxes and the way in which they are imposed on the economy. For example, a variety of European countries face higher tax burdens than Canada, yet they have been able to achieve better productivity and faster growth than we have.²¹ Why is this the case?

One possibility is that the Canadian tax system relies too heavily on taxes that have large distortions on the economy. They create the greatest disincentives to engage in those activities, such as savings and investment, that promote productivity enhancement. In this regard, the most costly taxes are income taxes on capital while the least costly taxes are those on consumption and labour. The reason for this is straightforward. Capital is vital to high levels of productivity and to rapid rates of productivity growth. In a world of globalization, it is extremely mobile. As a result, any attempt to tax it at relatively high rates will result in capital moving elsewhere.

²¹ Jonathan R. Kesselman, "Tax Cuts for Growth and Fairness," *Policy Options*, December 1998



Compared to other countries Canada relies very heavily on the personal income tax, and we tax capital income at higher rates than do other countries. This is true not just of the United States but also of European countries such as Sweden, the Netherlands, Britain, and Italy. In part, this is due to the fact that we tax consumption and labour income, via payroll taxes, at rates substantially below those of other countries and thus are forced to rely heavily upon broadly—based income taxes.

On the corporate side, several issues were raised before the Committee. The first was a different treatment of the various corporate sectors. Some receive preferential treatment over others. Witnesses, such as Kesselman, argued that this distorts business decisions and creates an inefficient allocation of resources. This sentiment was echoed by Rick Egelton of the Bank of Montreal, who added that the tax rates are highest on those sectors, such as services, that are associated with the new economy, and we tax the least those that are part of the old economy.

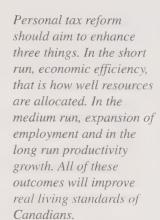
Professor Kesselman also suggested that the employer component of EI premiums should be experience—rated, which simply means that those sectors that constitute a heavier drain on the system should pay more.

The Canadian Federation of Independent Business stressed the adverse effects of profit—insensitive taxes. The government's increasing reliance on capital and payroll taxes negatively affects the cash flow of small businesses even when they may be earning only small profits or suffering losses.

The other component of corporate, and personal, taxes that was subject to criticism related to the tax treatment of capital gains. Investments in risky ventures, for example small knowledge—based firms, are impeded by a relatively high tax burden on capital gains. The American evidence, as presented to the Committee by Douglas J. Porter of Nesbitt Burns, indicates a negative relationship between the capital gains tax rate and capital gains tax revenues. This suggests that not only do accrued capital gains become realized when tax rates are low, but that the investments generating those capital gains are encouraged by low tax rates. The capital gains tax rate in the United States now stands at about 20 percent, whereas in Canada it is closer to 40 percent for those in the highest tax bracket. According to Dr. Mustard, the Canadian tax system does not provide incentives for the long—term commitments that build wealth. In his testimony before the Committee, he said "...I am not cheerful about your tax policies and your capital gains tax, in companies like Ballard, where you use stock as a method of paying people."

The Brain Drain

The export of Canada's elite labour force can have a substantial, negative impact on productivity, economic growth, and thus the standard of living of all Canadians. There are several reasons for this, according to Professor Kesselman.²² In the first place, highly–skilled workers generate benefits that flow to the economy as a whole. They enable Canadian firms to be competitive



Jonathan Kesselman



Jonathan R. Kesselman, Policies to Stem the Brain Drain – Without Americanizing Canada, March 1999.

I think what's far more important to the emigration—certainly of our recent graduates and our very young people—has been the simple lack of availability of jobs in Canada over the 1990s compared to a very low unemployment rate in the United States.

Lars Osberg

Those immigrants coming in can't be compared directly to the people we're losing to the U.S., but comparing them to the entire native born Canadian population, the immigrants are 1.6 times as likely to hold a bachelor's degree, and they're 3 times as likely to hold a masters, Ph.D. or a medical degree. So they are very highly qualified.

Scott Murray

internationally, providing jobs for all Canadians, even most with lesser skills. They are the crucial factors of production in knowledge—intensive industries and thus help the Canadian economy to evolve into a knowledge—based economy.

Highly-skilled workers are also highly-paid workers, and therefore the source of substantial tax revenues. They also tend to rely less heavily on government services. Thus they are generally net contributors to the fiscal position of governments and their departure means that those who remain in Canada must pay higher taxes in order to maintain the level of services to which they have become accustomed. These higher taxes, however, will further discourage productivity increases and economic growth.

The brain drain, to the extent that it exists as a significant phenomenon, not only affects our productivity growth but it is in turn a result of our productivity record, since increases in wages and salaries are ultimately linked to productivity increases. Highly–skilled Canadians are attracted to the high incomes they can earn in the United States, and the gap is a direct function of our poor productivity record.

Whether or not Canada is experiencing a brain drain is a subject of much debate. Statistics Canada believes that we are, on balance, a net recipient of skilled labour. A recent study, by the Bank of Montreal, which puts migration trends within a longer–term context, also concludes that there is no great exodus at present.²³ Nevertheless, there is strong anecdotal evidence that highly skilled Canadians are leaving in ever–increasing numbers. In the last half of the 1980s Canada was losing about 15,000 skilled workers to the United States every year. About one third of these individuals were permanent migrants. In this decade, migration to the United States of highly skilled labour has grown substantially. The number of permanent migrants, however, has not changed much. What we are witnessing instead is a substantial increase in the number of temporary migrants to the United States.²⁴

Whether it be permanent migrants or temporary workers, Canada is clearly losing more high skilled workers to the United States than we are receiving in return. Depending upon the field of specialization, the gap is significant: we are permanently losing to the United States four times as many engineers as we are receiving in return, nine times as many health professionals, almost six times as many management professionals, and two and one–half times as many professors and teachers.²⁵

The brain drain is an issue that is shrouded in controversy and poor measurement. The data presented to the Committee by Statistics Canada provide no evidence of a widespread and systematic loss of highly skilled labour. Indeed, it suggests exactly the opposite, that we are the net

²⁵ *Ibid.*, p. 109.



²³ Bank of Montreal, "Trends in Canada–U.S. Migration: Where's the Flood?" *Economic Analysis*, March 24, 1999.

The Conference Board of Canada, *Performance and Potential*, 1998, Ottawa, 1998, p. 111.

beneficiaries of well-educated and highly skilled workers. Moreover, the data on temporary migrants are highly unreliable. They are subject to administrative practices that change over time. For example, according to Statistics Canada, every time a Canadian hockey team crosses the border to play in the United States, the movement is recorded as a temporary migration of workers. The same would be true in reverse when American teams come to Canada.

On the other hand, the Committee is presented with anecdotal evidence that suggests it is a very real problem in certain sectors of the economy. Those who must recruit executives and professionals find it difficult to attract non–residents to work in Canada. Peter Smith, for example, noted that Bombardier is the third–largest manufacturer of airplanes in the world. Nevertheless, it still finds recruitment difficult. In addition, we were told by Sally Brown of the Association of Universities and Colleges of Canada, that Canadian universities are losing senior faculty not only to the United States but to other countries as well. Our institutions of higher learning are so uncompetitive that they cannot attract the best professors. Instead, they are replacing senior faculty with junior faculty members.

While the brain drain might not be a significant drain on Canada's productive capacity in aggregate, its existence even on a small–scale might be telling us something about the nature of our economy. The fact that it appears to be a serious problem in certain areas tells us something about the ability of the Canadian economy to provide opportunities for its citizens, especially its younger citizens. It, like a fever, might not be threatening in itself but tells us that the patient is sick. Thus, it matters that 40 percent of the graduating nursing class leaves Canada. It is also important to know that, while New York law firms may not be recruiting a large number of Canadian law graduates, they are recruiting a high proportion of the best, one—half of all A—student graduates from Osgoode Hall Law School, for example.

By way of summary at the aggregate level, are we experiencing a brain drain to the U.S.? Unquestionably, yes, over a range of occupations affecting the health industries the most, almost certainly the direct result of a lack of opportunity for those workers in Canada.

Scott Murray





SOME BASIC LESSONS LEARNT BY THE COMMITTEE

The discussion above gives a flavour of what is known about productivity and its relation to the standard of living. The Committee will continue its investigation within the context of its Pre–Budget Consultations and make recommendations to the government next fall.

Nevertheless, it is clear that there is a need for better statistical analysis in this area. Our understanding of productivity, and the statistics we collect, is still based on the old economy. If governments wish to promote policies relevant to the new economy, the economy of the future, it is important that they have the basic knowledge to formulate appropriate policies and to judge the efficacy of those policies.

The Committee recommends, therefore, that the federal government ask Statistics Canada to formulate a research agenda for the betterment of its statistical compilations regarding productivity measurement and provide the necessary support to pursue that agenda.

Although it is clear that much still needs to be known about the process by which productivity is enhanced, and increased over time, there were several areas of consensus. We can summarize them under three broad categories. The first relates to the economic and institutional environment created by governments. This can be thought of as the broad macro environment. The second area of consensus relates to the importance of capital accumulation in the productivity equation. The third element is innovation.

Providing an appropriate macroeconomic environment is the role of government, in particular the federal government. This refers to monetary policy, fiscal policy, trade and competition policy. It involves prudent and responsible fiscal policy, as characterized by balanced budgets and low government debt. On the monetary side, it is evidenced by low and stable inflation and low interest rates. Trade and competition policy conducive to productivity growth means low entry barriers and access to world–scale markets. On the trade side, it is important that we pursue greater economic integration with the most developed nations so as to reap the benefits of their best practices.

Capital can be thought of as comprising three distinct elements. There is physical capital, human capital, and social capital. To some extent all are linked together, but nevertheless, each has a distinct role to play. Physical capital, comprising machinery and equipment, and public infrastructure, have traditionally been the most important source of productivity gains. The higher the capital/labour ratio, the higher will be the level of labour productivity. Public infrastructure, for example roads, sewers, water systems, enable the market economy to function efficiently. Clearly then, physical capital comprises one component that is provided by the private sector and another provided by the public sector. The government has an important role to play with respect to both components. It finances, and typically directly provides, public infrastructure. Investment in private capital is influenced by the

The message of small business to governments over this period of time has been very consistent: lower taxes, lower government debt and lighten up on the burden of complex and onerous regulation and user fees if the productivity in the small-firm sector is to improve.

Catherine Swift



A stable macro– economic environment with low inflation brings lower interest rates and boosts confidence, encouraging investment which enhances productivity growth and boosts employment.

> The Department of Finance, Economic and Fiscal Update, 1998

macroeconomic environment as well as the tax system. The government must ensure that the level of taxes, and the composition of those taxes, does not hinder the accumulation of private capital.

Human capital reflects the skills, and ability to learn new skills, inherent in the labour force. It is the result of education and labour force training. Increasingly, however, it is also thought to be the result of early childhood development which essentially determines the extent to which education and labour force training can be effective. Since human capital rests with individuals, it is ultimately their choice to make such investments. Government, on the other hand, is the primary supplier of basic education. It also affects, through the tax system, incentives for the acquisition of such capital.

Social capital is a more nebulous concept. Several witnesses spoke of its importance. For example, Mike McCracken considered it to be an important element in the productivity equation. One of the elements of social capital is, for example, an equitable distribution of income. But while a more equal distribution of income might be associated with higher standards of living, it seems to be more the result of economic growth rather than a determinant of it. Fred McMahon argued that policies designed to foster economic growth might have a negative impact on income distribution initially but this result eventually reverses itself. Dr. Mustard, when discussing the slowdown in growth that appeared after 1975, noted that it becomes more difficult to effect a redistribution of income when economic growth, and income growth, is slow or non–existent. In this sense, social cohesion results from productivity enhancement and economic growth, and does not cause it. In other words, we must first bake the pie before we can cut it up and distribute the slices. The bigger the pie, the more slices we can cut, or the larger the slices might be.

The same thing can be said about the health of Canadians. Does a healthy society promote growth or does growth enable us to have a healthy society? The Committee heard testimony that American automobile firms decided to locate plants in Canada because of the quality of the workforce – they were more committed to their jobs, and they did not suffer from some of the health and drug—related problems that afflicted American workers. This point is undoubtedly true, and a healthy workforce is essential to productive workforce. However, as noted by Thomas d'Aquino, it requires a productive economy to make investments that are needed for a healthy workforce. This seems to be an example of a virtuous circle, with a healthy workforce leading to more productivity leading to a healthier workforce.

Government is the primary provider of this social capital.

The final element is innovation. Again, it is to some extent linked to some of the elements mentioned above. But in many respects, its value to productivity arises from institutions, the market which fosters a dynamic process of competition, the structure of firms which determines how change is accepted and implemented, and the incentive structure which affects the willingness to undertake such changes.



Innovation tends to have large spillover effects, consequently private decisions will generally lead to an under–investment. That is why most countries have policies designed to encourage information creation and diffusion. In a small open economy, it is important to determine the relative importance of information diffusion and information creation, and the links that might exist between the two.

The government affects innovation to the extent that it allows a society to be open, with the free exchange of ideas. Regulations, that affect the way in which ideas are used and diffused, will also affect innovation.

The Committee also learned to distinguish between the short and long term. The Canadian economy performed less than admirably through much of this decade and many of our economic problems are the result of this under performance. These are important matters and must be addressed by government. At the same time, we have come to realize that the standard of living and productivity are very long—term concepts. They require that the government focus its attention beyond the business cycle and further into the future. There is no quick fix. The payoff of enhanced productivity comes well into the future.

I think it's very important for this committee to distinguish between the productivity debate and the high unemployment debate and the tax debate because they are linked but one is quite short-term and the productivity is really a long-term concern that we should have as a country and it's not something that you can quick fix. So just cutting taxes will not give you the productivity increase tomorrow that you may want.

Maureen Farrow

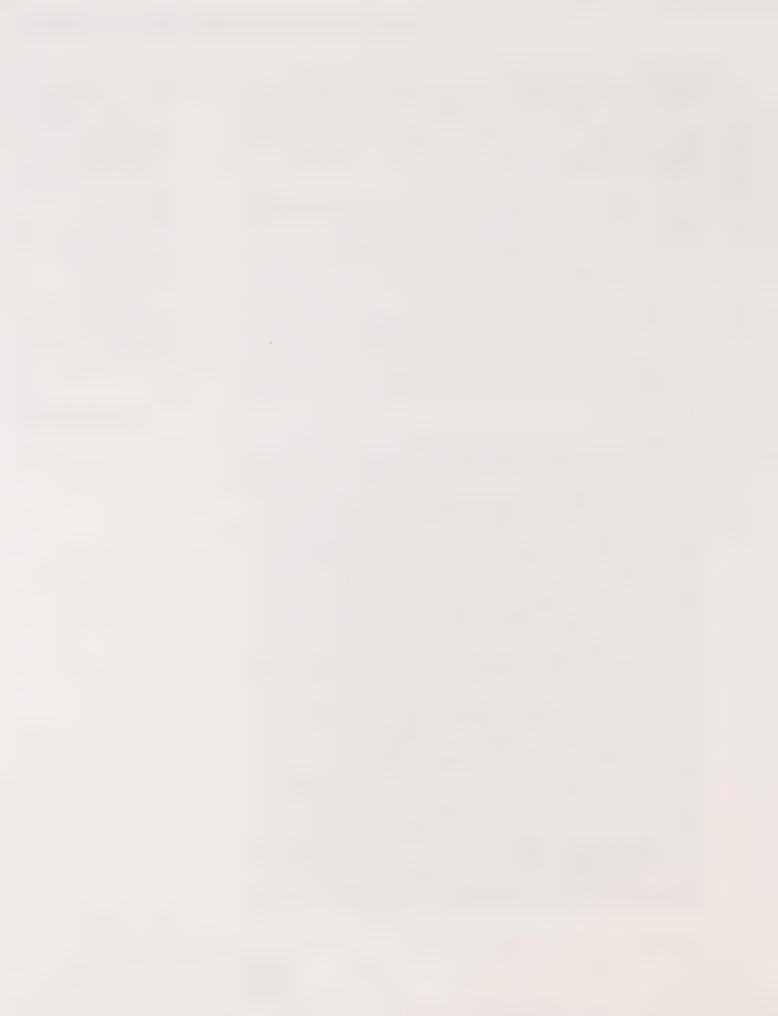
Three Views on a Productivity Covenant

It is vital that government policy exploit the benefits that come from enhanced productivity. The federal government should, therefore, commit to a Productivity Covenant with Canadians. Just as Program Review is an ongoing examination of federal spending, this Covenant should subject all existing government initiatives (spending, taxation and regulation) to an assessment which evaluates their expected effects on productivity and hence the standard of living of Canadians. Every new budgetary initiative should be judged according to this productivity benchmark. (House of Commons Standing Committee on Finance, *Facing the Future: Challenges & Choices for a New Era*)

"I remember a number of years ago, every government policy was supposed to go through an environmental assessment. Maybe it's time to think about... how friendly is this particular budget measure to productivity growth. We may not be able to measure it, but we can look at the measure and say this particular tax change doesn't hurt productivity growth. Do we really want to do that? Maybe that's the type of mindset we should carry forward in the future." (Rick Egelton, Bank of Montreal)

"The risk is there is so little consensus that everybody around this table will have their own pet project and wrap it up in a productivity blanket and you're going to be told 101 different things you should do to raise productivity in support of all of our various projects. We may be right, we may be wrong but it's such a broad amorphous thing. You're not going to necessarily know whether any particular project is pro or anti-productivity." (John McCallum, Royal Bank of Canada)





GOVERNMENT INITIATIVES TO DATE

As noted earlier, economic growth and enhanced productivity are long-term challenges. They result from investment and innovation, both of which are inherently risky. Thus they can only flourish in an environment that minimizes risk and uncertainty.

Getting the Fundamentals Right

The federal government has undertaken two major initiatives that promote such a favourable environment. One was the commitment to price stability and another was the elimination of the federal deficit and the new commitment to gradually reducing the debt load.

The fiscal trend towards ever increasing debt and rising debt to GDP levels was generally viewed as counterproductive and unsustainable. It was counterproductive in the sense that it drained savings from the economy, savings that would normally go towards investing in productive assets. It was also counterproductive because, by increasing risk premiums, growing government debt led to higher real interest rates. Any initiative, like an investment or innovation, that produces benefits only in the future will be discouraged by such high interest rates.

The pursuit of price stability is also a crucial element for long-term economic decision making. Price stability leads to lower interest rates. More importantly, however, price stability restores the informational value of the price system, allowing investors to make better-informed decisions as to the most productive uses for their financial capital. In addition, price stability removes some of the distortions caused by the tax system. According to Peter Howitt, "inflation impedes the functioning of the long-term capital markets essential for the operation of efficient but very roundabout techniques of production, by forcing savers and investors to engage in an unwanted gamble concerning inflation when they use these markets." It also discourages saving by introducing "extraneous uncertainty." ²⁶

There are several ways in which this occurs. The most pernicious effect of inflation is to reduce capital formation because taxes are applied to nominal and not real returns. This reduces the after tax real return on investment and hence discourages its formation. In addition to the reduction in long–term capital formation, inflation tends to change the composition of investment, away from plant and equipment and into real estate. A large part of technological progress, approximately 80 percent,²⁷ is embodied in new equipment and anything that discourages investment in new equipment hinders technical progress.

The most useless and the most destructive form of spending is spending that you can't afford. The classic example that we have in this country is that we are spending some \$40 billion a year in the service of the national debt. There isn't a member of Parliament here today who would disagree that that is not a productivity-enhancing investment. That does very little for productivity.

Thomas d'Aquino



"The decline of about 10 percent in the Canadian dollar against the U.S. dollar from the autumn of 1997 to late 1998 exerted upward pressure on consumer prices over the past year."

Bank of Canada, Monetary Policy Report, May 1999



Peter Howitt, "Endogenous Growth Theory: Taming the Winds of Change, or Tweaking Neoclassical Economics?" In Thomas J. Courchene, Editor, Stabilization, Growth and Distribution: Linkages in the Knowledge Era, The Bell Canada Papers on Economic and Public Policy, Queen's University, Kingston, Ontario, p. 141.

²⁷ Centre for the Study of Living Standards, *Productivity: Key to Economic Success*, Report prepared for the Atlantic Canada Opportunities Agency, March 1998, p. 26.

The impact of government policies is obviously important, because they affect the framework within which business is carried on.

Jim Frank

Governments can, and often do, get in the way of entrepreneurship by imposing regulations and legal processes that hinder change and innovation among enterprises of all sizes, not just big ones. They can erode the incentive to compete by providing protection and limiting markets.

Jim Frank

In pursuing these broad policy initiatives, often referred to as "getting the fundamentals right," the federal government has restored to the Canadian economy two essential ingredients for growth and has set the stage for other policy initiatives to be effective.

Enhancing Competition

The process of technological change responds to economic signals, prices and profits. Price stability helps to ensure that those signals are accurate. Competition, on the other hand, ensures that relative prices reflect market conditions.

The primary way in which a small economy can ensure that its markets are subject to competition is to open up its borders to free trade. Canada has done this through the Free Trade Agreement (FTA) with the United States and the North American Free Trade Agreement (NAFTA) signed with the United States and Mexico. Further free trade agreements with Chile and Israel also boost competition in domestic markets.

To see how dramatic the impact of free trade has been, we need only look at trade statistics with the United States. Since 1990, both imports and exports have more than doubled. Indeed, Canadian trade now amounts to more than 70 percent of GDP. In the mid–1980s it was about 55 percent, and in the mid–1950s it was only 30 percent of GDP. The fastest growth in trade has occurred in those sectors that have been the most liberalized as a result of the Canada–United States FTA.²⁸

Competition is also enhanced by ensuring that there is free trade within the country. In this regard the internal trade agreement, while less than perfect, also subjects domestic producers to greater competition. Modern technologies mean that distance and transportation costs are no longer effective barriers to competition. Regulatory changes and trade agreements are needed to ensure that those barriers in fact come down.

Regulatory reform has also led to more competition in domestic markets. Primary examples of this are the telecommunications and transportation markets. But similar initiatives are being undertaken in the financial sector as well. Examples include the crumbling of the financial pillars, greater openness with respect to foreign financial institutions, and new ways of organizing financial institutions. In this regard the federal government is proposing to allow foreign banks to directly branch in Canada and it is giving serious thought to allowing co–operative financial institutions to organize themselves into banks.

With the publication and examination of the report of the Task Force on the Future of the Canadian Financial Services Sector, the federal government has opened the door to a possible, profound modernization of the Canadian financial sector.

Daniel Schwanen, Trading Up: The Impact of Increased Continental Integration on Trade, Investment, and Jobs in Canada, CD Howe Institute, March 1997.



While regulatory reform has helped to increase competition, services have often been shielded from foreign competition through investment and trade restrictions. The technology of the services sector has also made it difficult to trade services over long distances. This is now changing. In addition, the World Trade Organization (WTO) Agreement on Financial Services will help to break down some of these barriers and consequently enhance competition.

Taxation

With elimination of the federal deficit, the government of Canada is now able to undertake a reduction in the level of taxation faced by Canadians. The tax/transfer system can have a significant effect on the productivity performance of the economy. Taxation not only reduces the disposable income of Canadian households, it affects the incentives that they face. The government's initial reductions were designed to lower the tax burden on lowand middle—income families and to help remove some of the barriers to labour force participation that are faced by families with children. Tax relief has now been given to all Canadians.

More needs to be done however. High marginal tax rates also affect incentives to work and to save. Modest initiatives have begun. With the elimination of the 3 percent surtax all marginal tax rates have been reduced. Nevertheless, the marginal tax rates faced by Canadians are significantly higher than those faced by Americans. This is true of labour income and it is true of investment income.

Investments for a Productive Economy

In recent budgets the federal government has undertaken a number of initiatives designed to enhance the economic infrastructure, both physical and human, of the Canadian economy. On the physical side, the Canada Works Program which was a tripartite infrastructure program helped to improve the transportation and municipal infrastructure system in Canada.

Similar initiatives have been taken with respect to research infrastructure and human capital development. The Canada Millennium Scholarship Foundation and the \$2 billion initial federal endowment helped to ensure that young Canadians have access to post–secondary education.

The creation of the Canada Foundation for Innovation, the enhanced funding for the granting councils, and the creation of the Canadian Institutes for Health Research have added to the research and development capacity of the Canadian economy. As importantly, these initiatives are helping to stem the brain drain, keeping some of the best and brightest talent in the country.

As a small economy, Canada cannot match the research and development activities of larger countries, in absolute or relative terms. It has often been assumed that Canada can take advantage of scientific endeavours in the rest of the world, merely adapting new inventions and innovations to the Canadian environment. But in many cases, this adaptation is as complex and expensive



The 1999 budget eliminated the 3% surtax for all remaining taxpayers.

...productivity underpins a country's ability to build and sustain a high quality of life. It is no accident that the productivity slowdown has conspired against our ability to sustain the social programming put into place in the 1960s, a decade when productivity growth was rapid.

The Conference Board of Canada, Performance and Potential 1998





\$200 million has been invested in the creation of the Canada Foundation for Innovation.

\$90 m be inv

\$90 million will be invested over the next three years in the development of Centres of Excellence.

In the 1999 Budget, EI premiums have been reduced. For employees, premiums are now \$2.55 per \$100 instead of \$2.70 per \$100 in 1998. This will lead to a \$1.1 billion reduction in EI premiums by the end of 1999. as the initial research and development. If this is true, then those economies that actually produce basic research have a distinct advantage over those that merely attempt to copy them.

In that case, government initiatives that actually encourage research and development activity are necessary for the promotion of innovation and technological development. This is why enhanced support for the granting councils and the creation of research–related establishments are important to enhancing economic growth. This is also why Canada's generous tax incentives for R&D are also important.

The Reform of Unemployment Insurance

In 1996, the federal government reformed its system of unemployment insurance, re–naming it Employment Insurance and significantly altering some of the parameters of the program. It was found, for example, that changes to the structure of the economy were excluding a larger proportion of the workforce from participation in the program while at the same time the nature of the program led to counterproductive behaviour on the part of workers and employers.

Some employers were using unemployment insurance as part of the remuneration package offered to employees. It had become an earnings supplement. In other instances employers found themselves competing with unemployment insurance for workers. Those workers suffered no penalty by extending the duration of their unemployment. As a consequence, the reservation wage (i.e. the wage the job seekers expect to receive before they will accept the job offer) and the duration of unemployment were pushed to artificially high levels by the previous system of unemployment insurance.

The unemployment insurance system also contributed to economic inefficiency, according to Fred McMahon. "In Atlantic Canada...there were in many months twice as many people collecting UI as were actually unemployed and about two—thirds more people collecting regular UI then were actually unemployed." Even during periods of high inflation, there were "labour shortages throughout Atlantic Canada."

The recent reforms have changed all this. Nevertheless, some witnesses believe that further reforms are needed. In particular, they argued for an end to the implicit wage subsidy that the EI program offers to some industries. This occurs as a result of the far greater reliance on EI benefits by employees in certain sectors and a proposed solution is to have the employer premium based on the layoff experience of workers in that sector.



Gross domestic product per capita has been used here as a measure of the standard of living because it provides a measure of the ability of a country to meet the needs of its citizens. It has several advantages. Data are readily available. They are, for the most part, free of value judgements. And they are collected in a fairly consistent manner in most countries, so that international comparisons can be readily made.

GDP per capita is not without its flaws, however. It fails to recognize the value of non-market production and consumption. Annual GDP also does not take into account the timing of consumption. In one year, Canadians might be borrowing heavily from abroad to finance that consumption. In another year, GDP might be at a similar level without foreign borrowing. Nor does GDP per capita take into account leisure.

Finally, GDP fails to take into account a variety of negative consequences of economic activity and social circumstances. It does not properly take into account the effects of pollution, crime, congestion, ill health, etc. Nor does it take into account such things as income inequality, income insecurity, the risk of unemployment, etc.



CONCLUDING REMARKS

In conducting these hearings, it has become evident to the Committee that enhanced productivity is not something we seek as an alternative to other policy goals. It is not an either/or proposition. Instead, productivity enhancement is a goal we seek to achieve in order to have the resources to achieve other goals.

Thus we should not pursue a productivity agenda at the expense of other social and economic goals. Quite the contrary. We should pursue a productivity agenda as part of a broader initiative to enhance the standard of living of all Canadians.

As well, we should not pursue this agenda because of any real, or apparent, gap between our productivity and that of other countries, particularly the United States. While international comparisons are useful in providing us with benchmarks against which we can measure our own performance, these comparisons should not dictate our own policy priorities. The goal is not to become more like Americans or Germans or Japanese. The goal is to achieve our potential and to deliver the highest standard of living possible, now and in the future. And whether or not our productivity performance is slightly better or worse than we thought it was, it is clear that we can do better.

Enhancing productivity is all about having more resources to satisfy the wants and needs of Canadians. Improved productivity provides them with more disposable income. It provides government with more resources without having to impose higher taxes. And it enables government to achieve more with the resources at its disposal.

If there is one word that is most relevant to the concept of productivity, that word is investment. There are a variety of reasons for this. In the first place, investment is an activity that produces benefits in the future and hence requires a longer–term outlook. This is true of productivity as well. There are no quick fixes to achieving our productivity potential, and the benefits of enhanced productivity will show up only in the future. Government policies designed to enhance productivity must therefore be based on a longer–term time frame.

If the government is going to pursue productivity increases as a major goal, it would be very beneficial to provide longer planning horizons in its budget. Two—year rolling deficit targets have served us well in eliminating the deficit. Now, however, it is appropriate to provide an indication of longer—term priorities and goals.

Investment is also a key word because it is through investment that productivity is ultimately enhanced. Whether it be private investment in machinery and equipment, private investment in research and development, public investment in infrastructure, public investment in education, or individual investment in human capital formation, it is the creation of some form of capital that is the key to enhancing productivity in the future.



Improved productivity is something that is largely achieved within the private sector. It is up to the business sector and individual Canadians to enhance productivity. They do so by investing in plant and equipment and new technologies, by engaging in research and development, by being innovative, by taking risks, and by investing in their own human capital on an ongoing basis.

THE COMMITTEE'S GUIDE FOR ENHANCING PRODUCTIVITY

The following is a list of some guiding principles that the Committee believes to be important for increasing productivity. This list sets out the role of government in creating a favourable climate that would be conducive to enhanced economic growth.

Getting the fundamentals right

The overall policy framework of the government is vital in establishing the economic environment within which the private sector operates.

- Reducing the debt to GDP ratio
- Low inflation
- Low short and long-term interest rates
- Continued Program Review to focus government on those areas in which it has a role to play and a contribution to make to Canadians' standard of living
- A Productivity Covenant to provide a benchmark against which government policies are judged and to help ensure that they are consistent with enhanced productivity

Tax policy

Taxes have a significant impact on the incentives faced by individuals and corporations. Tax policy is not just a matter of the overall tax burden. Marginal tax rates and the definition of the tax base can also have a significant impact on those incentives.

- Higher basic personal exemptions to remove lower income families from the tax rolls
- Lower marginal tax rates
- Eliminate the 5% surtax
- A corporate tax system that is neutral and treats all industries as consistently as possible
- Corporate taxes which are, to the greatest extent possible, based on profitability
- Internationally competitive tax rates
- Capital gains taxation to encourage risk taking
- Tax provisions such as Employee Stock Option Plans that enhance productivity by encouraging employees to share in the risk and profits of firms
- A re–examination of the threshold for the small business tax rate



Support for education and skills development

These measures recognize the fact that our competitive advantage increasingly lies with our labour force.

- Enhanced access to post–secondary education
- Tax support for higher education and life-long learning
- Tax support for education related savings

Support for R&D

As the use of new technology is the key to greater productivity in the long run, these measures are designed to promote the development and diffusion of new technologies.

- Tax support for research and development
- Programs for technology diffusion
- Support for research infrastructure
- Adequately-financed granting councils

Social and labour market reform

Efficient labour markets are as important to enhancing productivity as are efficient capital and goods markets.

- EI reform
- Measures to overcome the "welfare wall"
- Secure social safety net

Trade policy

Trade policy enhances competition and expands markets. It allows Canadian firms to achieve economies of scale and long production runs that might not be possible if they served only the domestic market.

- Additional free trade agreements like NAFTA
- Multilateral agreements like WTO
- The elimination of internal trade barriers

Letting the market work

As productivity enhancing measures are most likely to be undertaken by the private sector, it is important that the market environment in which the private sector operates provides the correct signals and incentives.

- · Reduced business subsidies
- Privatization
- Reduced use of economic regulation to limit competition and market entry
- Reducing the burden of regulatory compliance, especially with respect to SMEs by rationalizing regulation, removing ineffective and uncompetitive regulations, replacing social regulations with direct government programs
- Use of rigorous Regulatory Impact Analysis Statements in order to determine if new regulations are beneficial



Despite the fact that productivity is determined on the shop floor, and in the corporate headquarters and laboratories of firms, government does have a significant role to play in the decisions that are made by these firms. The government is responsible for creating the environment in which the economy operates. It sets the monetary and fiscal environment of the economy and hence has an impact on business and consumer confidence. The tax system affects the incentives faced by workers, savers, investors, and entrepreneurs. And finally, government has a role to play when markets fail, i.e. when the social benefits of certain activities differ from the private benefits. In this respect government is a complement to, but not a substitute for, the market.

We were told by numerous witnesses that, in pursuing a productivity agenda, we should not succumb to the temptation of trying to pick winners. There is no magic formula leading to higher productivity. While there are both macro and micro—policies that the government could use to enhance productivity, and while both avenues should be explored, broader initiatives are probably the best to take in a world of uncertainty. Getting the economic and fiscal fundamentals right is a perfect example. These initiatives are clearly contributors to enhanced productivity and can only improve future economic performance.

Another obvious contributor is a more open and flexible economy. The Governor of the Bank of Canada, Gordon Thiessen, argued that promoting greater flexibility was one of the most beneficial things the government could do to enhance the productive capacity of the economy. Such flexibility should characterize product, labour and capital markets.

We believe that our approach to deregulation of the financial services sector, as outlined in *The Future Starts Now:* A *Study on the Financial Services Sector in Canada*, provides a good example. Unless there are legitimate consumer protection, safety and soundness, or competition concerns, we recommended that financial institutions be as free as possible to pursue new opportunities. A similar approach could be applied to other industries as well.

In the same vein, measures that encourage investment, work force attachment, risk-taking, etc., are also undoubtedly beneficial to productivity enhancement. The most important instrument at the government's disposal in this regard is the tax system. The effect of tax changes on productivity depends upon the nature of the tax changes (whether they apply to investment or labour income, whether they reduce marginal tax rates, how corporate taxes are reduced, whether taxes apply to capital, income, or payrolls). Nevertheless, a balanced reduction in taxes can have only beneficial effects on productivity.

As we have noted earlier, the government has taken a variety of initiatives that satisfy our guiding principles for productivity enhancement. The Committee obviously supports the continuation and expansion of such endeavours. Nevertheless, there are several areas that we believe the government should consider initially and could start quickly to move on.

While the federal government has started to reduce personal income taxes, first in a targetted fashion, then more broadly, there is still much potential for



additional tax relief. The high income surtax remains in place. The capital gains tax rate is about twice that found in the United States. Taxpayers are subject to the highest marginal tax rate at a level of income well below that at which Americans are subject to their highest tax rate. The middle marginal tax rate is still higher than it was originally intended to be. The federal and provincial governments continue to tax the capital of financial institutions and other corporations. The threshold at which the small business tax rate ceases to apply has been eroded over time and needs to be re—examined. The tax system might not be appropriate for the "new economy" and might need to be reformed so as to support measures such as employee stock ownership plans that have the potential to enhance productivity.

The other area in which productivity enhancing measures have a great potential is with respect to even greater free trade – it increases competition and offers larger markets to Canadian companies. In addition to NAFTA, Canada has signed free trade agreements with Chile and Israel. South America remains a choice opportunity for free trade. But so does Europe, a continent which, now having a common currency, constitutes an economic market that rivals that of the United States. Free trade and unrestricted investment between Europe and Canada will challenge Canadian corporations to be more productive as they would be competing with the best corporations in the world, alongside those in North America and Japan.

Finally, we see great potential in further deregulation of the Canadian economy. Economic regulation, which limits entry and controls prices and business activity, is not as prevalent as it was in the past. Several previously heavily regulated industries are now subject to intense competition. Telecommunications and transportation are two Canadian examples of this, but this type of regulation has not been totally eliminated in those sectors.

There is still more to be done, however. The financial sector, although having enjoyed substantial legislative and regulatory reform in the past, is still far from being as flexible as it could be. Now that the United States is finally pursuing a profound regulatory reform of its own, the pressure for reform in Canada can only grow. And when we recognize that communications innovations such as the Internet will truly allow Canadians, Americans, and others to shop the world for financial services, Canadian institutions will have to increase their productivity to match that of foreign institutions.

Productivity is affected by more than just economic regulation. Any regulation imposes a compliance burden on business firms, especially SMEs. These regulations require time and effort to comply with. Unless there are valid policy objectives, and benefits to Canadians, associated with these regulations, that time and effort would be best employed in making firms more efficient.

THE COMMITTEE'S FINANCIAL SERVICES SECTOR MODEL

In the Committee's response to the Task Force on the Future of the Canadian Financial Services Sector, we presented a model for financial institutions that contains most of the elements that we believe to be important in enhancing productivity. This model is presented below, in terms of initiatives that we supported. The Committee does not present this model as the best, or favoured, option. It is, however, an approach which is consistent with the preconditions for productivity that we set out above, it is appropriate given the nature of the financial sector, and it could be adapted for the rest of the economy.

Structural Flexibility

- A lightly regulated financial holding company model
- A single ownership regime that would apply to financial institutions on the basis of size, not the type of institution
- A flexible definition of wide ownership
- Demutualization of insurance companies, with the potential to engage in amalgamations during the transition period, after conversion from a mutual to a stock company
- The ability of small Schedule I banks to re-categorize on the basis of the recommended ownership regime

Competition

- The promotion of new entry via reduced capital requirements in some cases, a streamlined approval process, and the elimination of the "one size fits all" approach to regulation
- The ability of foreign banks to establish direct branches in Canada (Bill C.–67)
- Enhanced access to the payments system for non–deposit taking institutions
- Measures to ensure access to other financial networks
- Greater functionality of Automated Teller Machines (ATMs)
- The creation of cooperative banks
- Greater powers for credit union centrals

Taxation

- Support for the removal of the withholding tax on arm's-length borrowings
- The elimination of special capital taxes
- A reduction in capital taxes in general
- The promotion of the common capital base
- General support for the use of profits sensitive taxes

A Favourable Macro and Regulatory Environment

- Initiatives making legislation consistent with electronic commerce
- New accounting guidelines
- A well-defined merger review process for financial institutions
- A consumer protection regime within the context of broad financial sector reforms
- Measures to improve services to knowledge-based industries and small and medium-sized enterprises
- Centralizing supervisory functions within OSFI
- Reducing regulatory overlap and duplication
- Negotiating a set of rules with the United States, governing the provision of services by "virtual" financial institutions

These broad areas of focus do not constitute an exhaustive list of initiatives that the government can still take. We propose them as complements to the other items listed in our guide to productivity enhancement which are as vital to increasing productivity. The government should, of course, continue to support education and skills development, and research and development. It should continue to provide a favourable fiscal and monetary environment. And it should continue to invest in infrastructure. The Committee believes that these areas are ones that the government could look at initially.

These hearings highlighted some of the statistical confusion that characterizes the productivity debate now taking place in Canada. The fact that renowned international and domestic institutions could come to different conclusions about our productivity record, indicates just how difficult it is to measure this variable. Indeed, the fact that an increasingly large part of the economy presents very real measurement difficulties is also testimony to the statistical and measurement challenges that we face.

While good data are important for the conduct of good public policy, we should not allow the current statistical challenges and controversies to detract from what we do know about the factors that contribute to improved productivity. The Committee believes that enough is known about this subject so that a productivity agenda should play an important part in the formulation of government policy. To this end, we believe that government initiatives should be judged in their consistency with this agenda. Thus we believe that the government should subject all of its initiatives to some type of test, ensuring that these initiatives contribute to, and do not detract from, productivity enhancement.



APPENDIX A LIST OF WITNESSES

Organizations and Individuals

Date

Statistics Canada

Tuesday, April 27, 1999

John Baldwin

Director, Microeconomic Studies and Analysis

Stewart Wells

Assistant Chief Statistician, National Accounts and Analytical Studies

As Individuals

Erwin Diewert

Economist, University of British Columbia

Rick Harris

Economist, Simon Fraser University

Dale Orr

Senior Vice-President, WEFA Canada Inc.

Andrew Sharpe

Executive Director, Centre for the Study of Living Standards

David Slater

Economist

Canadian Labour Market and Labour Productivity Centre

Wednesday, April 28, 1999

Shirley Seward Chief Executive Officer

National Research Council of Canada

Arthur J. Carty President

Statistics Canada

Garnett Picot

Director, Business and Labour Market Analysis
Division

Scott Murray

Director, Culture, Tourism and the Centre for Education Statistics

Date

As Individuals

Jonathan R. Kesselman University of British Columbia

Kathryn McMullen Network Chief and Research Associate Canadian Policy Research Networks

Lars Osberg Economist, Dalhousie University

Jim Stanford Economist, CAW Canada

As Individuals

Thursday, April 29, 1999

Jonathan R. Kesselman University of British Columbia

Mike McCracken Chief Executive Officer and Chairman Informetrica

Fred McMahon Senior Policy Analyst, Atlantic Institute for Market Studies

Aerospace Industries Association of Canada

Tuesday, May 4, 1999

Peter Smith
President and Chief Executive Officer

Association of Universities and Colleges of Canada

Sally Brown Senior Vice-President

Business Council on National Issues

Sam T. Boutziouvis Vice-President, Economics and Global Competitiveness

Thomas d'Aquino
President and Chief Executive Officer

David Stewart–Patterson
Senior Vice–President, Policy and
Communications

Date

Canadian Association of University Teachers

Jim Turk
Executive Director

Canadian Chamber of Commerce

Nancy Hughes Anthony
President and Chief Executive Officer

Dale Orr Member, Economic Policy Committee

Canadian Federation of Independent Business

Catherine Swift President and Chief Executive Officer

Garth Whyte Senior Vice-President, National Affairs

Coalition for Biomedical and Health Research

Barry D. McLennan Chair

Council for Health Research in Canada

Peter A.R. Glynn Member of the Executive Committee, President and Chief Executive Officer, Kingston General Hospital

Federation of Canadian Municipalities

James W. Knight Executive Director

Gilles Vaillancourt Mayor of Laval, Québec

HEAL — Health Action Lobby

Mary Ellen Jeans Co-Chair and Executive Director, Canadian Nurses Association

Natural Sciences and Engineering Research Council of Canada

Thomas A. Brzustowski President

Date

As Individual

Fraser Mustard
Founders' Network Canadian Institute for
Advanced Research

Association of Canadian Community Colleges

Wednesday, May 5, 1999

Pierre Killeen Senior Government Relations Officer

Bank of Montreal

Rick Egelton
Senior Vice—Presient and Deputy Chief
Economist

Genome Canada

Lap-Chee Tsui
Co-Chair, Interim Board of Directors (Genome
Canada) Geneticist-in-Chief, The Hospital
for Sick Children

Insurance Bureau of Canada

Paul Kovacs Vice—President, Policy Development and Chief Economist

Loewen Ondaatje McCutcheon Ltd.

Maureen Farrow Head Economist

Nesbitt Burns

Douglas Porter
Senior Economist and Vice-President

Partnership Group in Science and Engineering

Howard Alper Chair and Vice–Rector Research

Denis St-Onge
Past President, Royal Canadian Geographitical
Society

Date

Royal Bank of Canada

John McCallum
Senior Vice—President and Chief Economist

As Individuals

Thursday, May 6, 1999

John Baldwin Director, Microeconomic Studies and Analysis Statistics Canada

Fred Bienefeld Research Associate, Canadian Centre for Policy Alternatives

Jim Franks
Vice-President and Chief Economist
Conference Board of Canada

Serge Nadeau Industry Canada

Daniel Schwanen Economist, C.D. Howe Institute

Andrew Sharpe Executive Director, Centre for the Study of Living Standards

Daniel Trefler Economist, Institute for Policy Analysis University of Toronto



APPENDIX B LIST OF SUBMISSIONS

Aerospace Industries Association of Canada

Association of Canadian Community Colleges

Association of Universities and Colleges of Canada

John Baldwin

Fred Bienefeld

Business Council on National Issues

Canadian Association of University Teachers

Canadian Chamber of Commerce

Canadian Environment Industry Association

Canadian Federation of Independent Business

Canadian Labour Market and Labour Productivity Centre

Canadian National Railway

Centre for the Study of Living Standards

Coalition for Biomedical and Health Research

Conference Board of Canada

Council for Health Research in Canada

Jake Drupsteen

Federation of Canadian Municipalities

Genome Canada

HEAL — Health Action Lobby

Insurance Bureau of Canada

Jonathan Kesselman

Mike McCracken

Kathryn McMullen

Fraser Mustard

Serge Nadeau

APPENDIX B

National Association of Women and the Law

National Research Council of Canada

Natural Sciences and Engineering Research Council of Canada

Nesbitt Burns

Lars Osberg

Partnership Group in Science and Engineering

Garnett Picot

Derwyn Sangster

David Slater

Jim Stanford

Statistics Canada

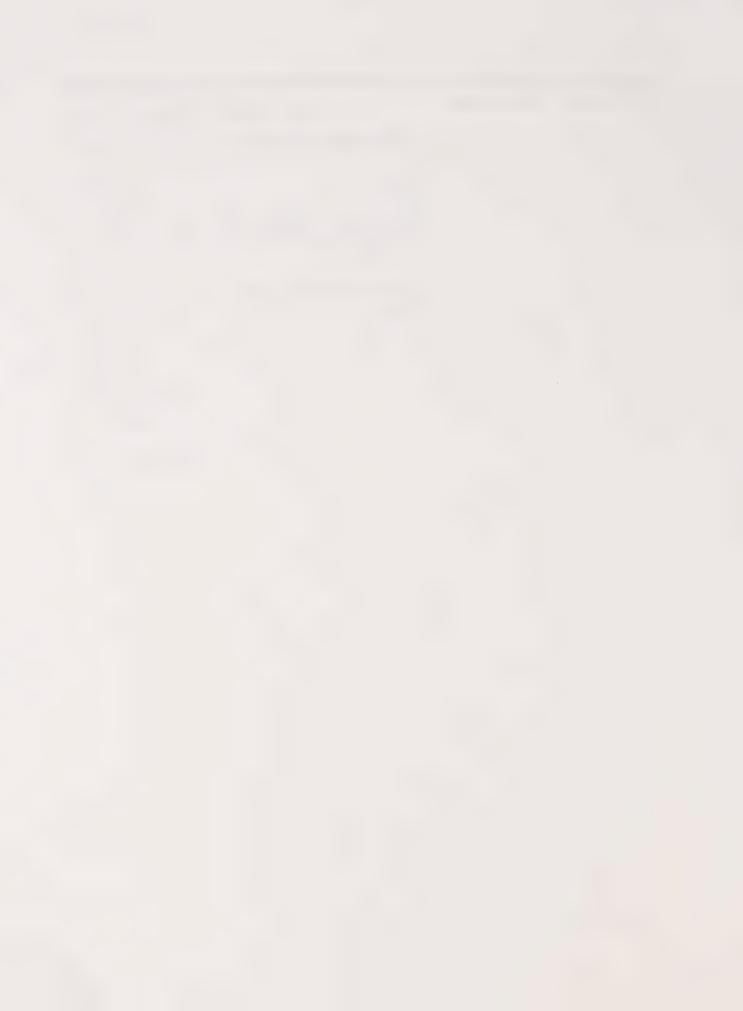
Daniel Trefler

WEFA Canada Inc.

Copies of the relevant Minutes of Proceedings (Meetings Nos. 177, 178, 180, 182, 183, 184, 186 and 192) are tabled.

Respectfully submitted,

Maurizio Bevilacqua, MP Chair



SUPPLEMENTARY OPINION OF THE OFFICIAL OPPOSITION

For the Official Opposition, this debate is not just about improving productivity for productivity's sake. It's about creating wealth in our economy. It's about raising the standard of living for all Canadians. It's about replacing those public policies that impede wealth creation with those that foster it. And since Canada does not exist in isolation in the world economy, these goals need to be measured relative to our political and economic partners, such as the United States, the G7 countries and the OECD, along with our historical performance and our present potential.

Canada's recent productivity record has been dismal. Productivity growth (as measured as GDP/hours worked) was very weak over the 1990's relative to previous decades. More recently, productivity growth was very weak in 1998 and is forecast to be weak again this year.

And in terms of real productivity levels, our productivity (GDP/hour worked), as well as our standard of living (GDP/capita) are both about 20% lower than the Americans', with the gap widening.

However, one reason our standard of living shrank during the 1990's was because our employment ratio as well as our rate of labor force participation fell in Canada while it increased in the U.S. So, while a long-term direct link does exist between productivity levels and shrinking standards of living, we need to recognise that other factors may also come into play. If we limit this debate to a narrow definition of "productivity", we risk ignoring many of the real economic problems before us, all of which have contributed to lowering our standard of living.

A Budget focussed on productivity alone ignores many other economic problems — The government has signalled their desire to enter into a "productivity covenant" and make the issue of productivity a major theme of their next budget. We are concerned that this is more a reaction to the latest economic fad than a true commitment to fixing the problems related to our shrinking standard of living.

Some witnesses also indicated that using productivity alone as the criteria for evaluating Budget proposals would be too narrow. For example, tax reductions stimulate GDP as well as employment. In such case tax cuts can be expected to increase economic growth and improve our standard of living. Therefore tax reductions are recommended by many parties. However whether a tax reduction can be expected to increase productivity (GDP/hours worked) depends on the specific characteristics of the tax cut.

Wealth creation is the best prescription for improving our standard of living — With the understanding that "standard of living" is defined by economists to be

GDP/capita, we believe this is a much more appropriate focus for our next Budget. Technically, GDP/capita is a measure of economic growth or wealth creation.

The Official Opposition recommends that the government move beyond the narrower definition of productivity to a broader goal of economic growth or wealth creation. By changing the focus from income distribution to wealth creation, we will shift the policy debate to "growing the pie rather than sharing the pie." More importantly, this larger tent will allow us to focus on <u>all</u> the policy changes needed to actually raise our standard of living in Canada.

Building a Framework for Wealth Creation — Once we accept that wealth creation is the most effective vehicle for improving our overall standard of living, we need to look at ways of implementing this at the policy level.

As a start, we believe the government needs to develop core principles as a framework towards this end. Only with such a framework will they be able to impose discipline on their policy decisions and avoid repeating the previous hodgepodge of counter–productive policies that limited economic growth and contributed to today's shrinking standard of living.

Our lack of a principled framework explains why today we have got "industrial development strategies" that encourage corporate welfare and dependency. It explains why, on one hand, we finance government R & D, but still maintain a tax system that discourages R & D in the private sector. It explains why we spend billions to educate high technology and medical professionals, only to watch them leave our borders because our income taxes are too high. And it explains why, over the past twenty years, we've fallen further and further behind our American neighbours in virtually every meaningful economic indicator? tax levels, income levels, job creation, unemployment rates, research and development, capital formation, etc.

We believe this wealth creation framework needs to include the following two principles:

1. A dollar in the hands of a taxpayer is more effective than a dollar in the hands of government

Why? Because people have many different wants and needs and one size government programs don't fit all. In a complex economy the most qualified people to make decisions about scarce resources are the private sector and entrepreneurs.

Therefore, government surpluses should be regarded as overpayments from the taxpayers;

2. Incentives Matter

If we want companies and individuals to invest in:

- research and development,
- innovation technology,
- · skill development, and
- capital improvements to businesses;

we have to offer them an incentive for doing so. Our current high tax system acts as a massive disincentive for all of these wealth creation activities.

3. A small, limited and focussed government creates the best environment for wealth creation

- Governments that grow beyond an optimal size "crowd out" private investment and impede wealth creation;
- Limiting the powers of the federal government to intervene in other jurisdictions and the private economy strengthens national unity and provides a more stable environment for investment.
- Government should focus it's limited resources on doing a few things and doing them well, such as preserving the rule of law, ensuring a sound banking system, stable monetary policy, and enlightened investment in healthcare and education.

In conclusion, the Official Opposition agrees with many of the recommendations contained in the Finance Committee's main report. We do, however, remain skeptical that the government will adopt them at a time when government is becoming larger and more interventionist, taxes continue to mount and when previous government—sponsored studies of the need for tax reform have gone unheeded.

BLOC QUÉBÉCOIS DISSENTING OPINION

REPORT OF THE STANDING COMMITTEE ON FINANCE

"PRODUCTIVITY WITH A PURPOSE: INCREASING THE STANDARD OF LIVING OF CANADIANS"

Having read the Report of the Liberal majority, the Bloc Québécois wants to begin by expressing its agreement with the Liberal observation that there is at the present time in Canada a serious problem with productivity and with the way productivity is measured, a situation that is by all appearances likely to get worse in the coming years. The Bloc supports the recommendation in paragraph 167 of the Liberal Report; although we are of the opinion of that such a measure should have been put forward long before now, it is still a recommendation with promise. The Bloc also wants to note the Report's excellent attempt to define the concept of productivity.

PUBLIC MANAGEMENT BASED ON PRIVATE-SECTOR STANDARDS

However, the Bloc Québécois wishes to express its very strong disagreement with the idea of the "productivity covenant" proposed by the Liberals and contained in the Report. The concept of the covenant was introduced last December when the Liberal majority's pre—budget report was tabled. It is our opinion such an initiative, although it would put an end to a number of federal programs that encroach on areas of provincial jurisdiction, would also have disastrous consequences for the management of public finances.

" ... this Covenant should subject all existing government initiatives (spending, taxation and regulation) to an assessment which evaluates their expected effects on productivity and hence the standard of living of Canadians."

The Bloc Québécois considers that introducing such a productivity covenant would represent a real danger for social, environmental and even cultural policies, since by definition these policies are not necessarily "profitable" in a strictly economic sense. Their impacts on productivity are extremely difficult to measure and would seem to require a certain degree of subjectivity. A number of programs resulting from these policies would thus run the risk of being eliminated, on the basis of a coldly rational and academic concept from which all human considerations have been abstracted.

Does this mean the disappearance of the charges levied on business, on the ground that such charges increase their production costs?

At the Kyoto Summit on global warming, Canada's position was already regarded as the bare minimum by contrast with that of Quebec; in the framework of a productivity covenant, would Ottawa's position not have been even weaker? Again in the framework of such a covenant, would the government ever have introduced Bill C-55?

It is clear to us that it would be abnormal for the management of public finances to be based solely on the criterion of productivity, in the manner of private enterprise.

TAX REFORM REQUIRED

The Bloc Québécois is happy see that the Liberals themselves recognize, on page ___ of their report, that the businesses and residents of Quebec and Canada must cope with federal tax rates that are much too high. Tax rates affect business productivity directly. Given the steady growth of federal surpluses, and with a view to improving productivity, the Bloc Québécois proposes once again that a real reform of the tax system be undertaken and that it target a reduction of taxes for middle income earners and small and medium—sized businesses, the two groups that have borne the cost of putting Canada's public finances on a sounder footing in the past few years.

THE SCANDAL THE GOVERNMENT WANTS TO COVER UP

Finally, the Bloc Québécois cannot sit by and say nothing while the Liberal majority attempts in the most contemptible way to praise one of the worst program reforms and to camouflage reality. We are referring here to the employment insurance program.

The Liberal majority Report dares to assert, on page ___, that it is changes in the structures of the economy that are responsible for the exclusion of an increasing proportion of the unemployed from employment insurance benefits. In fact it is the successive reductions in the program's accessibility, brought about by the Liberals, that have resulted in there being only about 40% of the unemployed who have access to employment insurance, as against 65% when the Liberals first came to power. To assert the contrary, as the majority Report does, is to display an unusual degree of intellectual dishonesty.

SUPPLEMENTARY OPINION
PRODUCTIVITY WITH A PURPOSE: INCREASE THE STANDARD OF LIVING
CANADIANS
SCOTT BRISON, MP
PROGRESSIVE CONSERVATIVE CRITIC FOR FINANCE, REVENUE CANADA,
AND THE TREASURY BOARD

The main flaw in our economic situation today is the very lackluster performance of our productivity in absolute, as well as relative terms. Since 1973, productivity growth in Canada has averaged a mere 0.3 percent per year. At this rate, our standard of living will take 231 years to double. Compare this with productivity growth from 1960 to 1973 of 2.0 percent per year, allowing Canadian's standard of living to double in only 35 years.

The P.C Party of Canada recommends that the government:

- · Lower personal income tax rates
- Eliminate "deficit reduction" surtaxes
- · Reduce corporate tax levels to be competitive with our trading partners
- Adopt the principles of the Mintz Report by having:
 - A corporate tax system that is neutral and treats all industries as consistently as possible (eliminate non neutrality)
 - Corporate taxes which are, to the greatest extent possible, based on profitability (reduce taxes on capital)
- Reduce the capital gains tax:
 - Currently, Canada's capital gains taxes are approximately double those of the United States.
 - This tax disparity is a key factor in the "brain drain" trend; particularly in the high tech sector where stock options are utilised increasingly in compensation packages.
 - Reductions in the capital gains tax rates in the U.S. have had a minimal impact on government revenue, and have spurred economic growth by unlocking huge amounts of investment capital.
 - There is an inextricable relationship between investment levels and productivity. We are failing to attract foreign investment into our economy. In 1985, Canada's share of foreign direct investment was 8.9% of the world total. By 1995, this share had declined to 4.4%. A one billion dollar increase in foreign direct investment is estimated to create approximately 45,000 new full time job opportunities and

generate approximately \$4.5 billion in gross domestic product in a five year period.

El Reform

- Further reductions in E.I premiums, which as a payroll tax have a negative impact on employment growth.
- Reforming E.I programs to better reflect regional needs in terms of seasonal employment, as well as training and retraining of the unemployed.

Trade Policy

 Actively pursue trade agreements with Mercosur nations (Paraguay, Uruguay, Argentina, Brazil) consistent with the goals of the Miami Summit in order to further increase trade in the Americas.

Letting the market work

- Implement a "Regulatory Budget", which would detail estimates of the total cost of regulation, including the government enforcement costs and the costs of compliance to individual citizens and businesses. It should also include a risk/benefit assessment of the regulation to enable cost—benefit analysis by parliamentarians.
- Implementation of a five year sunset clause on all regulations to ensure relevancy and benefit of regulations in a current context.
- Cost Recovery Program: The federal government should impose a
 moratorium on any increase or introduction of new fees under its cost
 recovery program. The government should also adopt a new
 framework for implementing regulatory fees to ensure uniform,
 consistent and fair application of regulatory fees across the
 government. Furthermore, that the government establish a central
 oversight and appeal mechanism for user fees.
- Inter-provincial trade barriers: The government, in co-operation with the provinces should reduce and eliminate inter-provincial trade barriers, which serve to deny Canadians the free-flow of goods and services across provincial boundaries, costing Canadians billions of dollars annually.
- The introduction and application of new technologies by Canadian small and medium sized businesses through tax credits, is particularly important for those businesses with export potential. This will help them add value to products before they leave Canada, which means more manufacturing jobs for Canadians and increased productivity.

• Spending estimates of government: Restore effective parliamentary scrutiny of government spending estimates to ensure that all public spending will be targeted to areas that are needed.

Public Sector issues

 Approximately 40% of Canada's economy is represented by the public sector. Currently there is no quantitative measurement of productivity within the public sector. The government should move to implement methods by which to gauge quantitatively productivity within the public service.

MINUTES OF PROCEEDINGS

Meeting No. 192 Monday, June 7, 1999

The Standing Committee on Finance met *in camera* at 5:37 p.m. this day, in Room 308, West Block, the Chair, Maurizio Bevilacqua, presiding.

Members of the Committee present: Carolyn Bennett, Maurizio Bevilacqua, Scott Brison, Odina Desrochers, Roger Gallaway, Sophia Leung, Gary Pillitteri, Monte Solberg, Paul Szabo and Tony Valeri.

Acting Members present: Marlene Jennings for Nick Discepola, Claude Drouin for Karen Redman.

In attendance: From the Parliamentary Research Branch: Marion Wrobel, Senior Analyst and Julie Cusson, Analyst.

The Committee proceeded to consider a draft report.

It was agreed, - That the draft report be adopted as the Twentieth Report of the Committee.

It was agreed, – That the title of the Report be "Productivity with a Purpose: Improving the Standard of Living of Canadians".

It was agreed, – That the Committee append to its report supplementary or dissenting opinions from the opposition parties provided that they be no more than 2 pages in length and submitted to the clerk in both official languages no later than 5 p.m. on Tuesday, June 8, 1999.

It was agreed, – That the Chair, researchers and clerk be authorized to make such typographical and editorial changes as may be necessary without changing the substance of the report.

It was agreed, – That the Chair be instructed to present the Twentieth Report of the Committee to the House.

It was agreed, – That the Committee print 2500 copies of the report in English and 450 copies in French, with a distinctive cover .

At 5:47 p.m., the Committee adjourned to the call of the Chair.

Pat Steenberg

Clerk of the Committee

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At 547 p.m., the Committee agreement is trained at the Countries

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